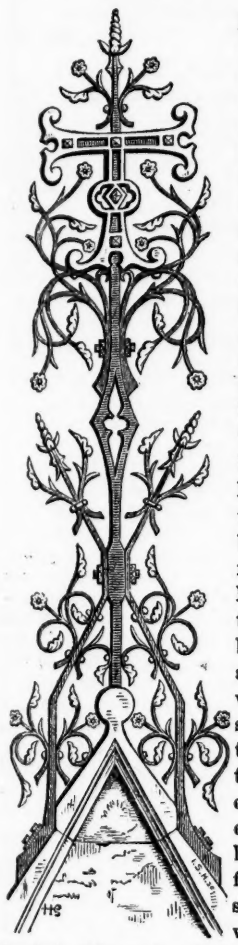
The Builder.

VOL. XX.—No. 1031.

Results of "The Exhibition."



THE International Exhibition of 1862 may be said to have terminated on Saturday last; and many persons who have felt the value of such assemblages of the products of art and industry, are doubtless thinking of results. We do not refer to the returns, important though they were to be considered, which are those that the newspapers generally, have kept before the public mind. These returns, it seems to be commonly understood, have sufficiently accrued to pay the cost of the building and of the management, together, but less a deduction to which the contractors for the building are said to have assented, though with what justice to themselves, supposing work to have been executed to the amount of their entire claim, we do not exactly see. We are, however, not in the confidence of the Commissioners, so cannot say whether we shall or not be their debtors for that *modicum* of professional experience which might have been involved in the adjustment of probably the largest claim for builders' extras that has been for some time seen. In common with those who were the best friends of the Exhibition of 1851, and even earlier exhibitions, we are thinking of results that were the originally contemplated objects for which much exertion was made in a series of years leading up to 1851, and others that were aimed at in the excellent idea, attributed to Prince Albert, of extending such exhibitions and making them international. Like as it is the duty of the chairman of a meeting, from time to time to keep the attention of those over whom he is presiding to the point which was being pursued, we deem it to be ours, to interfere, with what authority might be accorded to us, and bring back those who may have been wandering, to the perception of objects which we cannot discover to have been adequately held in view during the last six months, and which so far as this country's action is concerned, might prove to be indefinitely warded off. Every one has somewhere heard said that there "will never be another Exhibition"; or that this one has been "a huge bazaar"; or that it has been "nothing like 1851": in short, the multitude who should have learned by it, as even the few to whom it might have been a grand mirror and chronicle of facts essentially valuable to future progress, have fallen into the habit of underestimating it, or not recognizing the desirableness of repetitions of such exhibitions. These several cases of misconception may be all summed up in the statement that the ignorant who should have been struck, by the sight of the collection, with the sense of their ignorance, and the minority of inquirers and instructors whose materials and appliances lay in the collection, have neither of them had the opportunity for seeing what is known to have been in the building. Such a state of affairs and present results is not only not a gain, and is a circumstance attendant upon and co-existent with some loss in the ordinary business of a year, but it is full of evil in the view of the future. This situation may be all traced to the same causes, the confused arrangement of the articles in the building; the disposition of the plan of the building itself; the classification, and the extraordinary number of exceptions to that of the catalogue, and to the designated arrangement of classes; to the want of order in numbers, which made the catalogue a mere encumbrance in the building, and useless in refreshing recollection at home; to the incomplete state of the building and collection during the only month in which it was comparatively free of crowds, and the absence then of many essentials such as the directing-boards, as names of schools in the picture-galleries; and to many other instances of bad management, which have consumed the time of persons desiring to extract value from the collection, without allowing them a chance of performing duties which it is one of the proper objects of such exhibitions to facilitate in every way. In speaking of management, we must not confine our comments to the British commissioners: several of the foreign and colonial divisions did not get out their catalogues till within a month of the date of closing; and some of them we rather think, within a fortnight of the time. Catalogues were printed, by the colonies especially, which were never to be found at the stalls; and no list of these different records was issued by the commissioners; though a daily *bulletin* should have been a necessary feature of the management. In truth, however, owing to the want of consecutive numbering in the exhibited objects, few of the catalogues which were not *catalogues raisonnés* like the Austrian catalogue, and the Italian, could, issued late as they were, be worth the cost of printing. The official catalogues,—whether the Industrial Department Catalogue, which gave three lines to the designation of a hundred different articles that happened to be by the same manufacturer; or the Illustrated Catalogue, costly and late in appearance, and which gave the largest space of description to the least deserving objects; or the Fine Arts' Catalogue, for which the Commissioners engaged an incompetent hand to write on architecture and other branches of fine art, and from which they omitted the information really necessary to a parallel of the schools, as well as a list or lists of the artists,—are however not to be instanced as illustrations of good management of the portion of the Commissioners' duty in question, and will be of no value as records. Thus the matter which should have been in print, to rectify unavoidable shortcomings, to enable a desiring student to turn chaos into order, existed not at all; and foreigners who had made the journey to London, specially in the view which we have held ourselves as prominent in the intention of such gatherings of products of art and industry, have gone back lamenting to us, that they had, owing to the absence of this rectification, obtained nothing to compensate them to the degree they had reasonably anticipated, for the derangement of leaving home. The very reports of the Juries, creditable as many of them are under the circumstances under which they were chiefly prepared, namely, before the articles themselves were completely arranged, do not reach the object of providing an adequate and appreciatory record of the numerous illustrative items of progress that were brought together. We suppose it would not enter into the mind of any one to now defend the awards that were made at the early period of the Exhibition at which the Juries were disbanded. Every possible variation of blunder we now know, was made by men, most of whom were the best that could have been chosen for their acquaintance with the subjects respecting which they were called in to adjudicate; and every absurdity of superlative upon superlative, the refuge of critics who, desiring to be just, have not time to analyze, and to note real *points*,—was ushered forth in the bulky volume which already would fetch but the price of waste paper. The "Reports," which are by individual members of these juries, and some of which, we believe, notwithstanding the juries were disbanded, have been touched up, must not be placed in the same rank with the publication of awards; but they are not the record which we should have fairly demanded to have had left at the close of the Exhibition. Utterly repudiating that this Exhibition should be the last; believing that it is necessary periodically to view and report progress, unless the world is to stand still, we propose hereafter to endeavour to show, whilst experience is fresh, some of the points which must be attended to in future undertakings of the same nature, at home and broad.

A NATIONAL SCANDAL.

THE HOUSING OF THE ARMY.

SOME years ago we exposed, with pen and pencil, the disgraceful and destructive manner in which our soldiers were crowded together in ill-ventilated apartments; and showed that this was quite sufficient to account for the frightful mortality which had prevailed amongst them. We figured, too, their crowded reading-rooms and guard-rooms, and the abominable manner in which married soldiers and their wives were lodged.* A Royal Commission, which was soon after issued, confirmed to the fullest extent all that had been said. Some improvements were made; and the death-rate, according to official statements, fell considerably. Various statements were made, too, as to the improved accommodation provided for married soldiers and their wives; and we had reason to hope that such scandalous scenes as we had witnessed were not likely to occur again. That we were premature in this belief a brief relation will show.

At the top of the island of Portland there is barrack accommodation for the soldiers who are placed there to guard the convicts; and we had an opportunity recently to see over the whole of the establishment. To our great surprise we were shown into a room (not a large one), which was occupied both for *living and sleeping purposes*, by two soldiers and their two wives, two children, and two servant girls, of about thirteen or fourteen years of age; making in all eight persons in one room; and this is permitted, if not authorized, or even enforced, by the Government of our land!

Another room was occupied by two soldiers and their two wives, but they had no children, and consequently did not require the service of servant girls. Our readers will be prompted to doubt the truth of the statement, but they may rely on its accuracy. It is no secret on the spot, and is pretty freely talked about.

We shall be glad to know on whom the responsibility rests of permitting the continuance of such an outrageous state of things.

NEW MATERIALS FOR THE LIFE OF GRINLING GIBBONS.

WITHIN the last few years—since the life of Gibbons was written at any length—the place of his birth has been determined past all future doubt. From his nativity, cast by his contemporary, no less a person than Elias Ashmole, we learn that he was born, not in London, as had been too readily believed, but in Rotterdam, on the 4th of April, 1648. The figure of his nativity was discovered by Mr. W. H. Black, among the Ashmole MSS., and may be seen, with many others, in the Ashmolean Museum, at Oxford. As far as I can decipher the planetary arrangements at his birth, his unrivalled excellence in wood carving was apparently unforeseen.

That he was of English descent I see reason to believe, for I find in the Works Accounts of the Crown of the time of Charles I. the mention of *Simon Gibbons*, a skilled carpenter, employed under no less a master than Inigo Jones. Of this Simon Gibbons I have found no other trace.

We first hear of Gibbons from Evelyn, in a well-known entry. That well-accomplished English gentleman found the sculptor, then (1671) unknown, busy at Deptford, with an elaborate

* See also "Town Swamps," p. 75, &c.

carving in wood from Tintoretto's cartoon of the Stoning of St. Stephen. Where is this carving? I have never seen a person who has seen it or can tell me where it now is, and I have been diligent in my inquiries. Horace Walpole had evidently never seen it; Allan Cunningham, I can state, had never seen it. What is known about it?

This miracle of carving in wood *was* at Cannons, in Middlesex, the princely seat of the Duke of Chandos. From Cannons it was "brought" to Bush-hill, near Edmonton, in the same county, the seat, late in the last century, of Joseph Mellish, esq. Mrs. Catherine Mellish, his widow, was in possession of it at her death, in October, 1794, and from that period I have lost all trace of it. "The architectural parts," says Lysons, "Environs," ii. 260 (writing in 1794-5), "are particularly fine."

Before I produce the many curious entries I have had the good fortune to discover touching our great sculptor, I will ask another question about a work by Gibbons, of which I can learn nothing more than the fact of his having executed such a work, and in whose hands it once was. Among the effects (1730) of Mrs. Oldfield, the celebrated actress, was the following article:—

"The Earl of Strafford, a whole-length, finely carved in ivory by Mr. Gibbons."

Think of the Vandyck collar, and in ivory, and by Grinling Gibbons. Walpole's point-lace cravat would surely fade before it. Where is this statue or statuette? Remember that it is no less a person and poet than Pope, who tells us that Mrs. Oldfield was a judge of lace:—

"Odious! in woollen! 'twould a saint provoke
(Were the last words that poor Narcissa spoke):
No; let a charming chintz and Brussells lace
Wrap my cold limbs, and shade my lifeless face:
One would not, sure, be frightful when one's dead—
And, Betty, give this cheek a little red."

And that her "maid" assures us she was buried in Westminster Abbey, "in a very fine Brussells lace head, a Holland shift with a tucker and double ruffles of the same lace, and . . . . a pair of new kid gloves." * Mrs. Oldfield was the very lady to possess and value such a Grinling Gibbons example; and I repeat my question,—where is the *ivory* Earl of Strafford, by the great G. G.?

I will now introduce entries of payments made to him by the Crown for "work done." Here is a Whitehall entry:—

"To *Grinlin Gibbons*, carver, for carving the Crown sceptre and tassell, with 9 boses of wood over the canopy, and for vallens, festoones, cornishes, and other carved works on the front of the organ, for the Tabernacle and all its relieves, and 14 figures in the *Chapel*; for a marble holy-water pot; and for a chimney-piece in the Great Bedchamber and another in the Little Bedchamber,—340*l.* 17s. 9d."

Works—Rebuilding Privy Gallery at Whitehall, 1685-6.

Here is another:—

"To Grinling Gibbons, carver, for carving and sculpturing by him done in her Majesties New Chapel at Whitehall, by Treasury order of 27 May, 1690,—361*l.*"

Works at Whitehall, 1690-1.

Here is a third, and one of historical importance (unknown to Macaulay), to be explained hereafter:—

"The said *Grinlin Gibbons* and *Arnold Quellin*, for making and carving the *great altar-piece of white marble*, veined, wrought according to a design and contract, they finding all materials and workmanship, with two marble columns under the throne, fluted, with capitals and bases (besides 14*l.* 18s. 2d. abated for a square white marble pillar delivered them),—1,875*l.* 1s. 8d."

Works—Rebuilding Privy Gallery at Whitehall, 1685-6.

Quellin made *Squire* Thynn and his coachman's monument in Westminster Abbey—famous, additionally, through Mr. Joseph Miller, better known as "Joe."

Stepping westward, we come to Kensington Palace,—Gibbons worked at Kensington:—

"To *Grinling Gibbons*, for 1,405 feet of Ionick modillion and hollow cornish, 942 feet of picture frame over the doors and chimneys, 89 feet of astregal moulding about the glasses in the chimneys; carving the king's arms, supporters, crown, and garter, the railes and ballisters in the *Chapel*, and several other services in and about the said buildings,—536*l.* 14s. 7d."

Works at Kensington, 1*st Oct.*, 1689, *to* 30*th Sept.*, 1691.

"To *Grinling Gibbons*, carver, for work done in the New Gallery building in the King's Great and Little Closet, in three rooms under the King's Apartment, in the King's Gallery, and other places,—839*l.* 0s. 4d."

Works at Kensington, 1*st Oct.*, 1691, *to* 31*st March*, 1696.

Windsor is next in our way. The following payments are new, and of moment. What was, and where is now to be seen, "the extraordinary fine piece of carved work made by Gibbons, and given by Charles II. 'as a present to the Duke of Florence'"?

"*Grinling Gibbons*, carver, for an extraordinary fine piece of carved work made and carved by him for his Ma^{tie}, and sent by his Ma^{tie} as a present to the Duke of Florence, 150*l.* And more to him for his pension, after the rate of 100*l.* per ann., according to his Ma^{ts} warrant, and due to him for half a year ended at Midsummer, 1682,—200*l.*"

Works at Windsor, 1*st Oct.*, 1680, *to* 30*th Sept.*, 1682.

"*Grinling Gibbons*, carver, for 2 chimneypieces carved with flowers and fruits set in the Queen's Privy Chamber and the King's Drawing Room, and for 26 foot of Picture-frame carved,—63*l.* 5s.

Works at Windsor, 1*st Oct.*, 1678, *to* 30*th Sept.*, 1680.

"*Grinling Gibbons*, carver, for sundry carved works by him performed, viz., for sixty panels carved with flowers, fruits, shells, and several other ornaments, set over the chimney in the angles of His Maj^{ts} Great Bedchamber, Little Bedchamber, and Closet, 60*l.* For carving 2 picture-frames set in the Queen's Chapel, 2*l.* 14s. Carving and Cutting the 4 white marble panels of y^{e} Pedestal of his Maj^{ts} [Charles II.'s] Statue on Horseback, 400*l.* And for cutting and carving the mouldings and ornaments for the Pedestal of the *large Dial* in the North Terrace, and for 17 foot of white marble for the 2 end panels of y^{e} Pedestal of *His Maj^{ts} Statue on Horseback*, 16*l.* In all as by 4 bills, 482*l.* 4s."

Works at Windsor, 1*st Oct.*, 1678, *to* 30*th Sept.*, 1680.

"*Grinling Gibbons*, carver, for carving work done and laid upon 28 seats and stalls carved with fruit, flowers, palms, laurels, pelicans, pigeons; 5 foot of cornice that has two members, enriched with leaves between each seat; 20 foot of framing to every seat, according to contract, 518*l.* More to him for carving the six vases with thistles, roses, and two boys, laurels, palms, and other ornaments, in the front and upon the top of the *King's Seat*, with drapery, fruit, flowers, grootesses, stars, roses, and several other ornaments of carving about the altar, pews, and other places in and about the *King's Chapel*, he finding timber and workmanship according to contract, 498*l.* 0s 5d.—1,016*l.* 0s. 5d."

Works at Windsor, 1*st Oct.*, 1680, *to* 30*th Sept.*, 1682.

"*Grinling Gibbons*, carver, for carving work done round the wainscot in *St. George's Hall* round the inside of the Pedestal panels to the cornice over the panels; for carving 141 feet 5 inches of great leaf cornice upon the Pedestal; 118 foot 6 inches of swelling moulding round the five doors in the Hall for carving 226 foot 3 inches of moulding in the upper moalding of the rail going up the stairs into the *King's Closet in the Chapel*, the panel in front of the stairs, the garter and festoons about the two Compass doors, the two Georges, the upper and lower rails on both sides, the panels and mouldings at the Throne in *St. George's Hall*, with several other ornaments belonging to the said Throne, 328*l.* 16s. 11d."

Works at Windsor, 1*st Oct.*, 1682, *to* 30*th Sept.*, 1684.

"*Grinling Gibbons*, carver, for carving several frames over the chimneys, picture-frames and altarpieces, in the *King's and Queen's Chapel*, y^{e} Queen's old Bedchamber and Dressing Room, and several other lodgings, 96*l.* 19s. 9d."

Works at Windsor, 1*st Oct.*, 1684, *to* 30*th Sept.*, 1686.

"*Grinling Gibbons*, carver, for carving two foliage panels for the *Confession chair* in the King's Chapel, 40s. And for carving a model for the founder to cast the copper pipes that convey the water into *the Queen's* bathing cisterns, 10s.—50s."

Works at Windsor, 1*st Oct.*, 1686, *to* 25*th Sept.*, 1688.

"To *Grinling Gibbons*, carver of her Majesty's works at *Windsor Castle*, for his allowance of 100*l.* per ann. for looking, cleansing, and repairing the said carved works for half a year ended Xmas, 1688,—50*l.* And for ten years' allow^{ce} at y^{e} said rate ended Micas 1701 allowed by warr^{t} of y^{e} late Lords Commiss^{rs} of the Treasury dated y^{e} 1st of December, 1691, which were confirmed and directed to be executed by y^{e} said late Lords Commiss^{rs} y^{e} 12th of April, 1695,—1,000*l.* In both, 1,050*l.*"

Roberts's Acct. of Works at Windsor from April, 1688, to 30*th Sept.*, 1702.

"*Grinling Gibbons*, carver, for carving y^{e} hollow of y^{e} cornice over y^{e} marble chimney piece in the *Queen's* New Closet by y^{e} Gallery, mending and new making some pieces that were lost of y^{e} carving in y^{e} *Queen's* Bathing Room; mending and altering the carving in y^{e} *Queen's* Closet, in the Long Gallery, and making new pieces, and for other carved works by him done as by two bills of y^{e} particulars appear,—5*l.* 14s. 4d."

Roberts's, &c. [*same service and time*].

"*Grinling Gibbons*, carver, for carving a chimney piece in lime tree with fruit, flowers, and birds, in y^{e} *Queen's* Dressing Room; carving six frames; carving a cock's head for y^{e} *Duchess of Marlborough's* side board, and a snake's head for a basin at y^{e} *Queen's* back stairs; for carving a plum for a glass in her *Majesty's Dressing Room*, and other workes, &c. by three bills,—39*l.* 19s. 10d."

Works at Windsor, 1702-7.

Gibbons says Walpole "had several disciples and workmen." He mentions Selden and Watson, and to these I now add a *third* and hitherto unknown assistant:—

"*Grinling Gibbons* and *Henry Phillips*, carvers, for severall sorts of carved works by them performed [at Whitehall] upon the Chimney-pieces, Pedestalls and Picture frames of the King's great and little Bedchambers and Presence, his Ma^{ties} Closet, Musicke Room, Eating Room, Withdrawing Room, and Back-stairs, the Queen's Withdrawing Room, Bedchamber, and Gallery, and in four rooms at the Duchess of Portsmouth's Lodgings.—625*l.* 14s."

The Crown Accounts contain a further joint payment to them of 614*l.* 17s. 8d. for works at Windsor. My extract is, unfortunately, imperfect.

The historical entry touching King James II., to which I have referred as new and unknown to Lord Macaulay, runs as follows:—

"To *Grinling Gibbons*, Master Carver, for taking down the *Marble Altar Piece*, with the Columns, Ornaments, and Figures thereto belonging, in the *late King James the Second's* Chapel at *Whitehall*, and loading the same into barges, and delivery thereof at Hampton Court, according to contract.—130*l.* More to him for carving cornishes, mouldings, and picture frames for architrave frese, subbase, and other carver's work by him done in and about the said buildings—520*l.* 7s. 4d."

Works at Hampton Court, 1*st April*, 1694, *to* 31*st March*, 1696.

Who, after reading this, will look on the altar-piece at Hampton Court Palace without recalling (forced as it were upon him) an instructive train of historical associations. That ill-suited altar-piece cost King James II. three kingdoms, placed his son-in-law, "the hero William," and his two daughters, on the throne of England, and was a primary cause that James died in exile at St. Germains.

Gibbons survived his wife between nine and ten months, the register of St. Paul's, Covent Garden, recording her burial on the 30th November, 1719, and that of Gibbons himself on the 10th August, 1720. Of their children—nine or ten in number—I can learn nothing but their names and the dates of baptism and burial of each in their father's and their own parish church of St. Paul's, Covent Garden.*

PETER CUNNINGHAM.

ARCHITECTURAL PROGRESS.†

ON such occasions as the present our view naturally ranges over a somewhat broader horizon than that which closes round our own sphere of action. We remember that we are an institution of respectable age, especially if age is to be reckoned by the march of events and the progress that has been made in our profession since we were established; in which progress we have had an active and useful share. But while we congratulate ourselves upon the past and present, our business is with the future. The architecture of to-day has been determined by events some of which are now long past, and whose influences will far outlast our time; but the architecture of the future will be in a great measure what we shall make it. We begin, then, by urging upon our members the acquisition of a thorough knowledge of the art of past ages as a preparation for future progress. We strongly advocate the study of professional practice as it now exists; but we do not profess to remain satisfied with it: if we did, our association must soon cease to be. There is little room in the world for societies intended to maintain things as they are: every body of men must have an active principle as a bond of union, and cannot properly seek to remain unaffected by external or internal influences. We desire to cultivate a habit of looking somewhat in advance of the present time, both in the projects of public usefulness, in which we are called upon to assist, and in the quality of art which we are expected to produce. It is necessary to avoid leading our younger members into a morbid desire for novelty; but it is not less desirable to preserve them from the opposite error: lead them, while they are studying the art as they find it now, to expect that practice and opinions will change considerably during a very few years, and to be prepared to take an active part in the labours and responsibilities that such changes involve.

To those who are able to remember several of our annual meetings, it is interesting to call to memory the different subjects that were prominent in our minds, year after year; and to note the alteration in our views and feelings, that the lapse of a few years can produce. If we look at the many excellent drawings in the Architectural Gallery, in the International Exhibition,—still more if we look back in our illustrated periodicals,—we are struck by the wonderful change in taste that has taken place amongst the more active minds in the profession. New ideas that once caused some excitement have ceased to be novelties, and have been absorbed in modified forms into the practice of design. They may have been simply reproductions from ancient examples; but being new to us, they have to some extent satisfied our desire for change, and have certainly infused variety and life into the particular class of art to which they belonged. For many years past such a process as this has been going on; nor do I think it has come very near its conclusion. The present is an age of discovery; in which, although much ground has been thoroughly examined, much has been left comparatively untouched. We are far from being able to say that we know all the beauties of Gothic art; while the discoveries of late

* Egerton [*i.e.* Curll's] Life of Mrs. Oldfield, p. 209.

* For some account of Mr. Rogers's restorations of Gibbons's carvings at Belton House, Lincolnshire, see the *Builder* of 12th July, 1856.

† From the President's address, Architectural Association, elsewhere mentioned.

years amongst Classical remains have been very valuable, and have done much to provide that kind of variety which was at one time so greatly needed. It is natural to avail oneself first of the ideas which come readily to hand, and which are of acknowledged excellence; and not till new discoveries become rare, and a pressure for original invention arises, is it likely to greatly prevail. The invention which is now exercised by the professors of the different styles is of a far more healthy kind than in years past: copyism is less encouraged: you cannot so frequently as formerly point to a whole building, or part of a building, as taken from a particular example. The architect works freely in his chosen style: he does not justify a fault by appealing to his copy; but says very fairly, "This is my design,—let me bear the praise or blame."

This may be very far from what some of the more advanced theorists upon architecture desire to see; but let them not be too impatient: forces are in operation which will allow nothing to stagnate, and will turn even the slowest of arts into a channel in keeping with the feelings of the age. We have had a comparatively quiet period for the study and revival of ancient styles: we are probably entering upon a period of activity in architectural matters for which we are scarcely prepared. It has happened that Gothic art, which has been so largely used in our new churches, has answered very admirably the demands made upon it; but it can hardly be so with all styles, when we apply them to the great variety of demands to which advanced civilization and wealth have given rise. In our own country, these demands are rapidly increasing; and at the same time new materials are being brought into use, which much increase the powers of the architect in matters of construction, and even in design, also. I hope to see amongst those architects who are celebrated for skill in design a much stronger disposition to avail themselves of new materials wherever their adaptability in point of economy can be fairly proved. Not until continued efforts have been made to treat a new material artistically should the attempt be abandoned; and we should never abandon it when, by so doing, we leave it in the hands of persons who will use it without caring anything for its artistic treatment. To me these things, under disguises, instead of taking the trouble to discover a form which becomes them, is as great a loss to art as is the attempt to supply some new want of modern times by twisting the design for an ancient building out of its proper use, instead of trying to supply the need from more original sources. I have alluded to these matters, though they are by no means novel ones, because I believe that while we are calling for more originality, we are throwing away very important opportunities for developing it; and because it is specially our business here to see that no occasion of doing a good thing shall pass; and, if it be at the same time a new thing, we profess to be better pleased. I will only say further, that such questions as these, where truth is involved, are above and beyond mere questions of style; and that any style which refuses to adapt itself to new purposes, and to use novel means, will in no long time become an antiquity, and give place to a more pliant rival.

We must, then, endeavour to promote originality, wherever a proper opportunity arises; but in doing so, I sincerely hope that nothing will be done to greatly check the strong feeling which men now have for the style in which they work. There is so little of enthusiasm in the world that it would be matter for the greatest regret to see that which exists so strongly amongst us reduced to a cold impartiality which could not be very far from indifference. Wherever work is to be done that is difficult, and not always agreeable, the man whose heart is in it is the man to do it. The study and revival of ancient styles is of a nature to produce feelings of a very strong kind: if it were not so, the art of architecture would be as dull and prosaic as any ordinary business in life: but, happily for us, we are employed in a pursuit in which we may, if we will, take a warm interest: we may feel that it is endeared to us by the labours which it has cost us, the friends who have aided us in it, the opponents against whom we have defended it. The man who has spent his best years for study either in foreign travel or in seeking out the exquisite remains that are scattered up and down his native country, can never be truly impartial. It is for the man who has done neither of these, or the man who has done both and cares for neither, to serve out justice with one weight and one measure. But we may be sure that it is by no such judgment that the fate of parties will be settled: the profession will settle the matter amongst themselves in the ordinary course of events. That style, the followers of which practise it with the truest feeling, and are at the same time most confident in its powers to supply the wants of the age, will contribute most largely to the style of the future.

But speaking as I do without professing to be impartial, I may be allowed to suggest that it is for the interest of all parties and for the great cause which through all our differences we profess to serve, that we should seek to temper our enthusiasm with a larger information upon the beauties and advantages that we claimed for the style which we do not profess to practise. We may depend upon this, that no very large body of professional men has become attached to any style by accident; and if we were to take some trouble to find out its merits instead of seeking for defects, we should be gainers in information, in liberality of idea, and in the power of judging correctly as to matters more immediately connected with our own pursuit. We should be able to discuss matters fairly open to dispute with something like good temper and with something like sound logic; and by being compelled to inquire into the hidden principles of that beauty which seems to us so obvious, but which does not affect all in the same degree, we should be more competent to produce designs claiming to be original, and could more safely leave the beaten track for fields now unexplored, but whose treasure may be not less rich than that now lying in our hand.

INQUIRY INTO THE BEST MODE OF DISTRIBUTING THE SEWAGE OF TOWNS.

THE commission appointed to inquire into this subject have issued their second report, and come to the following

Conclusions.

We submit the following conclusions as the result of these our further investigations:—

1. That the pollution of the rivers of the country is so great and general as to become a national evil.

2. That this pollution has progressively increased in recent years; is still rapidly increasing; and, unless arrested, must necessarily continue to do so in proportion to the increase of population, the progress of house-drainage, and the extension of manufactures.

3. That, although one of the chief causes of this pollution is the practice of discharging sewage as it comes from towns into the nearest rivers or watercourses, thus converting them into sewers; yet the pollution from this cause is by no means confined to towns which have adopted systematic measures for improved sewerage. Nor is the amount of pollution in proportion exclusively to the completeness of such works; for, in many of the towns in which the bulk of the foul refuse is still retained in cesspools and middens, the neighbouring rivers are in a highly offensive and noxious condition, even where the cesspool system is maintained on the alleged ground of preserving the local rivers from contamination.

4. That, besides the pollution of rivers by the discharge of sewage into them, they are in general made the common and ready receptacles of an immense amount of offensive matter from factories, dye-works, gas-works, iron foundries, mills, and other establishments, while cinder-heaps and masses of rubbish of every description that cover their banks, and the large stones and other refuse that obstruct the beds, testify to the general neglect and ill-usage of rivers.

5. That by far the greater part of the solid matter which is held in suspension in water is readily deposited in rivers, covering the banks with mud; permanently raising the beds; gradually destroying the scouring power of the water, and partially silting such rivers up; and that in some instances these deposits have accumulated to such an extent as to impede navigation, to render the surrounding country subject to floods, and to entail a vast expense in periodic cleansing.

6. That, however the appearance of the water may be improved after these deposits have taken place; yet the deposited matters, lying in the bed of the current, are under conditions favourable for putrefaction. And, when the foul mud is disturbed by the presence of rain and during floods, it sends forth its effluvia amidst the populations which are near, and even in the course of the rivers far distant.

7. That this condition of rivers is a public and national nuisance: it interferes with the convenience and comfort of all classes of the people: it damages various and important interests, as those connected with manufacturing establishments, canals, fisheries, and so on: it deteriorates property to a large extent; and, as interfering with a main source of water supply, is of serious importance to the public health.

8. That this state of things has grown up in consequence of the anomaly that while important powers of river conservancy have from time immemorial been conferred on local authorities; while special powers have been vested in improvement commissioners and companies for isolated local improvement, for drainage, for navigation, and so on; and while even private water-rights and ownerships in streams have been recognized and conferred; no general jurisdiction whatever has been exercised over the whole waters of the country; no protection has been accorded to the many great and varied interests connected with rivers.

9. That the only radical way of restoring the rivers to their original purity is to prevent the discharge of foul matters into them, and especially the discharge of sewage and other refuse of large towns; but that, in various cases where this radical treatment has been deemed inadmissible, expedients for the purpose of depriving the sewage of its offensive and noxious properties have been brought into practical operation, and have been attended with more or less success.

10. That among those methods, of which experience is most satisfactory, no one is suited to the circumstances of all towns; some towns presenting much greater difficulties than others; yet the more this subject has been investigated, the more convincing is the evidence that there is no town which might not, with reasonable care and at moderate cost, greatly mitigate the existing evils where it may not be practicable wholly to remove them.

11. That, for example, the chief part of the nuisance arising from the discharge of sewage into rivers and streams, may be obviated by simply arresting the solid matter in suspension in the liquid; particularly in towns of small populations, where the sewers discharge into considerable streams of water. In these cases it may be practically sufficient to adopt simple means of deposit combined with mechanical appliances for arresting the solid matter; and these may be of the most inexpensive character: in other cases, however, and especially during summer, the addition of chemical agents may be required for the more complete separation of the solid and the deodorizing of the liquid sewage. But although, by such means as the above, sewage may be rendered inoffensive to smell, we cannot guarantee that, even after the best practicable application of such means, sewage can be allowed to flow into brooks or rivers without rendering the water unsafe and improper for drinking.

12. That among deodorizers, the material which up to the present time has been found to be the best for this purpose, is perchloride of iron, the only objection to its general use being its comparatively high price; but in many cases the employment of the cheaper material, iron, may suffice.

13. That the value of the solid portions of sewage being small, all attempts at realizing profits from its preparation as manure have signally failed; but, mixed with sweepings and other dry refuse of towns, a ready sale is found for it at 2s. or 3s. per ton, which is sufficient to pay a large proportion of the necessary working expenses for preventing nuisance.

14. That the cost of the operation has in various instances ranged from ½d. to 3d. per head of the population per annum, including interest on the outlay for works: there can therefore be no difficulty on the ground of expense in requiring the adoption of adequate means of a removal of nuisance in every case in which injury or inconvenience is shown to arise.

15. That the most beneficial and most profitable method of disposing of sewage, where circumstances will admit of this use of it, is by direct application in the liquid form to land: where such applications can only be conveniently effected near habitations, it may be desirable to employ some deodorizing agent; but usually, if proper arrangements are made for conveying sewage on to the land, this expense need not be incurred.

There is reason to hope that trials and experiments instituted by the commission, and still in progress, in relation to the irrigation of land with sewage, will remove some doubts and difficulties which have hitherto prevailed in retarding a more general adoption of this desirable mode of disposing of and utilizing the sewage of towns.

Recommendation.

Having now fully stated our conclusions as to the means of disposing of the sewage of towns,

and shown that the remedies for the evils which are experienced, although various, are both practicable and economical, we beg to repeat our conviction that the only security for a general and continued employment of such means will be the establishment of responsible conservancies throughout the country, armed with adequate powers for preventing damage and for effecting improvements. We believe that these powers would be best vested in independent local authorities, such as the present commissions of sewers, acting under certain Government regulations in respect to borrowing money and other matters. Our inquiry, however, has of necessity been of too imperfect a character to enable us to set forth for consideration any decided measures in detail on so large and important a question. There are many subjects to be inquired into; vast interests to be considered; which are beyond our present power or our province to enter upon. We can only respectfully but earnestly recommend that such inquiries should be instituted into the various points bearing on the subject; so that measures may be submitted which will enable Parliament to deal with the existing evils in a way most conducive to public interests.

(Signed) Essex.
Henry Ker Seymer.
Robert Rawlinson.
J. Thomas Way.
J. B. Lawes.
T. Southwood Smith.
John Simon.
Henry Austin.

LIEBIG ON DRAINAGE AND BRITISH AGRICULTURE.

THE "EUREKA" SYSTEM.

Professor Liebig, in a new introduction to his "Agricultural Chemistry," makes some remarks on the cultivation of the land, which the high reputation of this chemist renders worthy of serious consideration.

After referring to the evil effects of exhaustive agriculture, which impoverishes the soil until at length it is no longer able to produce crops; this, says the professor, is a process which may extend over many hundreds of years, and in some cases even up to a thousand. At length the exhaustive effects reach a point when they become too clearly visible: expedients are then resorted to, one after another, each of which recognizes the deterioration of the soil. English agriculture exemplifies the disturbance of Nature's economy on the part of a highly-civilized nation. In the last quarter of the eighteenth century was commenced the importation of bones into England, which continues uninterruptedly to this very day. "The importation of guano began in 1841: in 1857, 286,000 tons were brought to England; while the average importation of bones has risen to from 60,000 to 70,000 tons a-year. One pound of bones produces in three seasons 10 lb. of corn, while 1 lb. of guano, in a course of five years, makes 5 lb. of corn. It may be supposed, without danger of falling into a mistake, that in the fifty years between 1810 and 1860, 4,000,000 tons of phosphates have been imported into England in the form of bones, linseed cakes, rape-seed, &c. These, in the same time, have produced 40,000,000 tons of corn, sufficient for the sustenance of 110,000,000 of people. Supposing that, from 1845 to 1860, that is, in fifteen years, the English fields have received an addition of 15,000,000 tons of guano, the corn produced by this artificial manure must be estimated at 7,500,000 tons, sufficient to feed 20,000,000 of people. Again, it is self-evident that if the phosphates imported since 1810, and the guano forwarded to England since 1845, had not exhausted part of their productive powers by employment upon the fields, these fields would have possessed in 1861 the essential conditions for the production of food for 130,000,000 of people. But with this calculation must be contrasted the astounding fact, that Great Britain is not able to produce the amount of food required for its 29,000,000 of inhabitants.

The introduction of closets into most parts of England results [at present] in the loss annually of the material capable of producing food for 3,500,000 people; the greater part of the enormous quantity of manure imported into England being regularly conveyed to the sea by the rivers."

After remarking that the same process of self-destruction is still going on, but in smaller proportion, in all the great towns of the Continent, Professor Liebig remarks that, "Nobody knows the sum total of nutritive element in the soil; and it is but thoughtless to suppose it to be inexhaustible; though what it yields every one may easily ascertain for himself. The object in view is not to extort the greatest possible quantity out of the soil, but to learn to economise our resources;" and further on, that, "all those countries of the globe where the fields have not had restored to them by the hand of man the elements necessary for the return of the crops, we may follow in their downward course from a period of the densest population to the ultimate condition of barrenness and desolation;" and that great Britain deprives all countries of the conditions of their fertility. "It has raked up the battle-fields of Leipsic, Waterloo, and the Crimea: it has consumed the bones of many generations accumulated in the catacombs of Sicily; and now annually destroys the food for a future generation of three millions and a-half of people. Like a vampire, it hangs upon the breast of Europe, and even the world; sucking its life-blood without any real necessity or permanent gain to itself. It is impossible to imagine that such a sinful disturbance of the divine order of things should be allowed to go on for ever with impunity; and the time will probably arrive for England, earlier even than for the rest of Europe, when, with all its wealth in gold, iron, and coal, it will not be able to repurchase the thousandth part of those essential conditions of life so frivolously wasted for centuries past."

Such are the views of the German professor on this most important subject; but great as is our respect for his chemical knowledge, there are some of his deductions from which we are forced to dissent. It is clear that the waste of the manure of our towns and cities is a matter to be greatly deplored; but it is also certain that in such situations as the metropolis it was impossible longer to continue the large sacrifice of human life occasioned by those bad sanitary arrangements which allowed poisonous refuse to accumulate in cesspools, and even in defective drains: such refuse would be valuable, certainly, if distributed over the land; but it was certain death to allow it to remain amongst the crowds of the living.

Although the great fertilizing quality of the sewage which has been passed from London and other towns into the Thames was well understood; in the metropolis especially, with such a vast population, no scheme was devised which could purify the dwellings, except by a thorough plan of drainage, which would effectually, and at once, carry off all night soil, and other matters which are dangerous in cities, to a distance; and the same may be said in connexion with most other towns; but earnest and able men are at work, studying how best to economize, without danger to health, the sewage which is at present allowed to run to waste; and no doubt, ere long, this task will be successfully achieved. All the outlet plans connected with the outfall of the metropolitan drainage have been laid out with a view towards rendering the sewage of the capital useful to the purposes of agriculture.

As to the "vampire" charge which is brought against us, it can scarcely be established in truth. From barren rocks, and in distant seas, British vessels have brought guano for the purpose of fertilising our fields and making up for that deficiency of which Professor Liebig complains. But for English enterprise, these foreign manures might have been likely to remain untouched and useless for the good of man for ages. With all this aid,—by means of improved farming, by the utilization of sewage, and by the cultivation of what are now barren wastes,—it is doubtful if Great Britain, as manufactures of various kinds extend, will be able to depend upon home produce for the feeding of our increasing population. Nor is this so necessary, under existing circumstances; for the wonderful extension of commerce, the application of steam to shipping, and the increase of the vessels of our own and foreign countries have brought the nations of the world more closely together; and enable us, as their great workshop, to depend, to a considerable extent, on the cornfields of other lands; and especially of the certainly unexhausted and scarcely exhaustible continents of America; for part of our bread and other necessaries of life. Nevertheless, no efforts should be left neglected,—nor do we believe they will be,—in the joint endeavour to improve the condition of the land.

The fact that for the present the animal and vegetable refuse of our towns is allowed to run to waste, although this be a very secondary consideration by comparison with the sanitary benefit already conferred throughout our town populations by the progress of drainage, has led, as our readers well know, to many commercial projects for turning town refuse to profitable use in a pecuniary sense. In general, however, as we have before said, these seem to be better adapted to small or rural populations than to towns of any extent; and amongst this order of commercial speculations we have classed the system of the Rev. H. Moule, and the "Eureka" system, as it has foolishly been called. Of this latter system we had occasion recently to speak, in a paragraph on the utilization of town sewage, in which we alluded to the rather flash title of "The Eureka Sanitary and Manure Company" of Manchester,—an allusion which appears to have been taken "in high dudgeon" by the chairman of that company; who has written us a long and angry lecture, in consequence, on his own superior sanitary knowledge, and on our sanitary ignorance (grown grey though we may well be said to be in the long years of our sanitary pioneering); and this ill temper has evidently been all the more especially displayed, inasmuch as we had the temerity to risk the spoiling of the Manchester prospects of this Eureka Company by expressing a hope that their scheme would not be put into practice there, "although there may be cases in which the system might be permissible or even advisable." After pouring out the not well-deodorized vials of his wrath over a large sheet of paper, the chairman concludes, of course, by modestly "hoping" we will "insert" this not very sweet-smelling nosegay in our "valuable journal;" which the company have hitherto considered it essential to take in; "believing that in it they *would* find an honest exponent of all schemes in which bricks and mortar were *concerned;*" and they trust that, by this insertion, "they will find that they have not been mistaken." Now, before all else, we must tell the chairman of the Eureka Company, that neither Eureka night-stools nor bricks and mortar are the interests in which we are "concerned" in this instance; but municipal health and human life. As for the question put to us whether we think we are "justified in applying the term 'flash' in any way to the company"; and apart altogether from the merits or demerits of the scheme itself; we are certain that at least nine-tenths of the readers of our paper, in which the term objected to appeared, will think with us that we *were* justified in applying it to such a word as "Eureka," so ostentatiously, so indiscreetly, and with such short-sighted policy, incorporated with the very title of such a company; and that it would indeed require a high order of merit in the scheme itself to enable it to withstand the ridicule attachable to the ludicrous and catch-penny association of the Eureka dirt with the Eureka shirt, the Aquascutum cloak, the Panniscorium shoe-leather, *et hoc genus omne.*

CONVERSAZIONE OF THE ARCHITECTURAL ASSOCIATION.

The members of this Association held their opening meeting and annual conversazione on the 31st ult., at their rooms, in Conduit-street. There was a numerous attendance of members and their friends. The chair was occupied by the president, Mr. Blashill. A donation of books from the Institute of British Architects was announced.

Mr. C. J. Adams, hon. secretary, read a report of the proceedings which had taken place during the session, 1861-2: with these our readers are already acquainted. A report of the Class of Design was also submitted. The condition of the class was said to be satisfactory, but the number attending was not so large as was desired. Sixteen new members of the Association were proposed.

The judges then delivered their report with regard to the competition for prizes. The following awards were made; and the successful candidates, as they advanced to receive the premiums which they had earned, were greeted with applause:—

First prize, Class of Design, E. J. Tarver.
Second prize, Class of Design, R. Phené Spiers.
Prize for Westminster Abbey sketches, E. J. Tarver.

Extra prize, presented by the president of the Association and the president of the Class of Design, to Mr. Walter Paris.

Prize Essay on the Westminster Abbey Visit, to Mr. Lacy W. Ridge.

The president afterwards proceeded to deliver his address, part of which we give elsewhere.

Professor Donaldson said he had, unfortunately, not been present in time to hear the whole of the very interesting and suggestive address just delivered; but to the portion read whilst he was in the room he had listened with much pleasure. Allusion was made in that address to Mr. Skid-

more's paper on iron work, and to that particular branch of art as one deserving the study of the Association. He must say that the collection of iron work exhibited at South Kensington afforded a remarkable illustration of the progress of manufactures and taste in this country. Such were now the superiority of design and facility of execution, that the hard material seemed to be rendered as pliant as clay itself, and put on a beauty of form which commended itself to all. It was a study of great interest; and the results gave evidence of a revival bidding fair to go beyond what had been attained in ancient times. With regard to the closer union of architectural societies, no doubt union was force; but sometimes there was great strength likewise in disunion, as it afforded room for a great variety of opinions, which were marked by an energy of purpose often wanting where matters went on in one common course. The co-operation of architectural associations in the larger towns might doubtless be productive of beneficial results; but it would be very difficult for the smaller ones distributed throughout England to take any effective combined operation. In conversation with professional brethren in the north of England, where he had lately been, he ascertained that the local organization had long become effete, owing to the limited number of architects and the difficulties lying in the way of energetic action. The president had invited them all to become talkers, and to cultivate the happy art of discussion. Now, there were two classes,—the talkers and the thinkers; and it sometimes happened that those who talked most thought least, and those who thought least talked most. What was requisite, therefore, was, that the talkers should become thinkers, and the thinkers talkers, and that no one should speak unless he had something to say which others could think about. There was always great danger in inducing a spirit of talkativeness: a thoughtful spirit was the one which students should cultivate. They should have a certain reserve and modesty in expressing an opinion, unless previously they had formed it carefully. When they had done this, they would become talkers to some purpose,—talkers to improve others and talkers to improve themselves. The chairman had further alluded to education, and to the scheme thrown out by the Institute, which he hoped would be productive of great advantages to the profession. It consisted of two departments—the theoretical and the practical. It was extremely desirable that the theoretical portion of the scheme as laid down should be acquired by young men, because it formed the basis and groundwork of that to which they were to owe their future success. Combined, however, with that theoretical instruction, it was highly desirable that there should be practical knowledge; and just as engineers send their young men into the workshop, to familiarise themselves with the materials and to handle the tools; he believed it would be desirable for young architects also to go into the workshop; to pass a short time there; to become accustomed to all the classes of materials employed in their profession, and to the use and combination of those materials. Thus they would learn in the very best manner the practical application of their theoretical acquirements. Allusion had been made in that evening's address to the architecture of the day; and a desire for progress had been expressed. But it was very desirable that such progress should take place in the right direction. Progress was made during the various phases of Mediæval art because people were not satisfied with the beautiful combinations of form, and the magnificent conceptions which distinguished the art of the twelfth century. What had been the result of departing from these simple principles of Gothic architecture instead of observing them more and more? The desire for novelty produced the Flamboyant style in France: in England it resulted in the Perpendicular order of architecture. So that the progress in art of that day was really a retrogression, and a departure from those high elements distinguishing the architecture of the twelfth century. Any progress which might now be attempted ought to be a wise progress, and not springing from a mere desire for novelty. It was not sufficient to produce something new: there must be a desire for higher excellence. Mere novelty was like fashion, which vaunted itself in all the extremes of form and shape and size. In bonnets, for instance, there had been two degrees—the high bonnet and the low bonnet: the high bonnet had carried the day. There were other developments of fashion, to which he would not allude further than to express a hope that further novelties would assume a wholesome direction. "Variety" was another word of much the same signification as "novelty." There was no doubt the mind sought for novelty; that even the best things tired; and that some new idea, some new impression, some new excitement, was eagerly sought; but variety also should be prosecuted in the right direction. It would then be honourable to those who succeeded in producing it,—satisfactory to those having the enjoyment of it;—and then indeed it would be truly progress.

The Chairman having invited Mr. Kerr to favour the assembly with a few remarks, that gentleman said he remembered, when the Architectural Association was started, sixteen years ago, in Lyon's Inn Hall, two gentlemen came down to assist at its inauguration. One of these gentlemen had just spoken. The other (Mr. Godwin) was likewise present; and it would be discreditable to the Association if so old a friend were not called on in the first instance to address those present.

Mr. Godwin said he was unfortunately not well enough to take any very active part in the conversation, but would with pleasure add a few words to what had been already so well said. He had left the room to which he had been confined for several days, because he wished to manifest the interest he always felt in the progress of the Architectural Association. The present, moreover, was an occasion on which the Architectural Association was specially bound to be up and doing. The announcement of the voluntary examinations, the arrangements for which had been organized by the Institute, would, he was quite sure, set a great number of members of the Association on the *qui vive;* and lead them to prepare themselves at once to go before the tribunal which would be formed. He did not know who the examiners might be: he had not yet heard; but he sincerely hoped they would be men of discretion, and men who would see in qualities like intellect and the power of application more virtue than in the simple power of answering questions, the result of cram. He had no doubt that such would be the case, and that the examiners would not endeavour to show their own abilities by exercising their power of placing young men in an unpleasant position in rejecting as many of them as they could; but rather, in making evident the powers of those young men, they would show the world that the rising generation of architects were preparing themselves creditably to take the places of those who had gone before them. He was not one of those who viewed with much favour an enforced diploma; but this voluntary examination was altogether different. It afforded an opportunity, to those who had carefully and thoroughly studied their profession, of proving that they had done so; and furnished them with the means of taking a position above the mere workers of rule by thumb, or those who had neglected the advantages held out to them. In parenthesis, he might observe, that no greater evidence of the advantages resulting from the Architectural Association could, perhaps, be pointed to than the excellent addresses delivered year after year by the successive presidents; and this he said without intending any flattery to the gentleman then in the chair. Had anybody stated sixteen years ago that such a series of addresses as they had listened to, or read, would have been forthcoming, they would have been told that such expectations were altogether out of the question. The series of presidents whom it had elected out of its own members was one of the strongest proofs of the value of the Association, and the ability which it had developed. He attached rather more importance than his friend Professor Donaldson to the mere power of talk. It was more necessary, no doubt, to think; but the thinker stood a chance of being hustled aside in the busy world if not gifted with a fluency of speech. It was necessary, in order to mature thoughts, to express them freely; to rub them against the opinions of others; and thus to acquire a facility of expressing, and, if need be, of defending them. It was this power which the Architectural Association, at its ordinary meetings, sought to develope; and he was sure the effort had proved of great advantage to all those who attended these meetings. In the present day, there was a great cry out for a new style. What Professor Donaldson had said on that subject was perfectly true. A new style would not come by crying for it; but if all worked earnestly with the new materials towards supplying the new wants of the period; bringing to bear the whole of the skill which they possessed; they would, depend upon it, leave a mark on the architecture of the nineteenth century to be recognized hereafter. He saw on the wall the face of a well-known old fellow, in cement, laughing at him. That same face was to be seen on the key-stone of thousands of doors in London,—a fact which showed the poverty of design that for a long time had been manifested; but which showed, likewise, how much pleasure might be given and good done by the artist. He entertained a notion that in the union of painting, sculpture, and architecture lay one great means of creating the new style of the nineteenth century; and he, therefore, hailed with satisfaction the endeavours made by the Association to establish a modelling class, which might train men in their future action to exercise a thoroughly artistic skill. He offered his best thanks to the Association for all they had done; and urged them to persevere; and he assured them that, to the extent of his humble power, he should always endeavour to co-operate with them.

Mr. Kerr said, referring to the remarks of Professor Donaldson, concerning the importance of practical knowledge, he would venture to point out one view of the question which had lately taken a strong hold upon his mind. All who heard him being in a manner fresh from the contemplation of the International Exhibition, the building and its contents; he would plainly ask why it happened that that great and important building stood, as it did, a direct discredit to the country; admitted on all hands to be so. He would not have it forgotten that the architectural profession had in good time resolutely protested against the design itself, and the employment of an engineer as designer, and that their protest had been deliberately set at nought. What, then, could be the reason of this? It was almost within the memory of living men that the English profession of civil engineers first came into existence. It was not in rivalry with the architects of that day as regarded architectural building, but purely from the necessity of the age, in respect of the more ponderous works of construction, that a class of men should devote themselves to the element of scientific building exclusively. Since that time the engineers had acquired, not in England alone, but in England in many respects peculiarly, a degree of skill which was matter of the highest pride. At the same time, the architects of England, in their more delicate and fanciful province, had done even greater wonders. He might again repeat what he had frequently affirmed, that the English school of architects of the present day, take them and their works as a whole, displayed an amount of ability in design which far exceeded any precedent in the world's history. In such circumstances, then, why was their protest in respect of the great work for the International Exhibition so deliberately set aside? An answer might be found in an argument which he had heard stated as the opinion, amongst others, of one whose happy memory would be affectionately remembered by every person in our land for ages to come—the late Prince Consort. This was the language which that intelligent and accomplished man was reported to have sometimes used:—"If we want any work done of an unusual character, and send for an architect, he hesitates, debates, trifles: we send for an engineer, and he *does it.*" Now he, for one, must give it as his opinion that *this was true.* Give the architect an ordinary commission,—a church, a mansion, or what not,—and his skill was matter of national pride; but go out of this track and demand an extraordinary effort, and the architect—it could not, need not, be denied—showed the want of that power and nervous action which the engineer therefore claimed as his own. What was to be said to this? It must no longer be. Some twenty years ago, or less, the architectural mind in this country turned itself to attack artistic weakness,—precedent, copyism, the supernatural authority of antiquity. The assault had proved successful: the artistic element of design had been set free from these principles. The architects of England, therefore, could now afford to take up a new course. As artists, it was vain to deny them the very highest honour. Why not, then, turn now to science? Let the intellect of the profession devote itself as resolutely to this new conquest as it did twenty years ago to that which had been since so gloriously achieved. The task would be by no means so difficult, either; whilst also the means of its accomplishment were evidently far more at command. It would be the duty of the profession within the next few years, in a word, so to apply themselves to scientific study, that it would be no longer possible for a man able and intelligent, and a little before his age, to argue that, because the architect was a hesitator, he was obliged to hand over to the engineer the architect's proper work; that, because the price to be paid for the element of art was the acceptance of scientific incapacity, he must be content to forego grace that he might secure

power. And this led him naturally to speak of the educational scheme which the Institute had recently promulgated. It had been prepared with the greatest care; and he would now claim from the Architectural Association, as the junior society, founded on educational grounds, and ever since its foundation firmly adhering to its educational programme, that the project of the Institute should be fairly accepted. There was nothing in it which the student could afford to dispense with,—nothing in it that he could profess to be beyond the limits of ready acquisition; and the supporters of the Architectural Association would not be true to themselves if they neglected frankly and unreservedly to meet the demands which the Institute had, at length, after infinite anxiety and trouble, found itself able to offer for their fulfilment.

Professor Donaldson said his friend and brother professor, Mr. Kerr, had passed some strictures on the Exhibition building; and he believed that public opinion went with him in these criticisms. But if that building was peccant in taste and in construction, it certainly contained one redeeming feature. Let them, therefore, pay honour where honour was due. He alluded to the services of his friend, Mr. Crace; who, by the elegance of the forms which he had introduced; by the combination of beautiful colours; and by the contrast of tones, had given life, and grace, and animation to a building which structurally wanted every one of these. They ought, therefore, to bear in mind how much they were indebted to him for redeeming the English character in point of taste, and for the pleasure which he had conferred on all those who went to the Exhibition.

Mr. Billings said there was high authority for the statement that, from the first, it had been decided—and a most insulting decision it was—that no architect should be employed in connexion with the edifice at South Kensington. Admitting to the fullest extent the services which Mr. Crace had rendered, it was impossible for any colouring to redress the structural errors of the building. An ugly form, no matter how it might dress itself, would still be ugly. He could not agree with all the observations which Professor Donaldson had made; especially with regard to departures from the architecture of the twelfth century. He recommended that style to all who wanted to get their per-centages easily. Professor Donaldson alluded to the Flamboyant style: he must know, although, doubtless, he had forgotten it, that the Flamboyant was the perfection of the combination of curves. Hogarth traced the line of beauty; and that was the form that prevailed in Flamboyant from beginning to end. As regarded the merits of the Perpendicular architecture of this country, he would refer to King's College Chapel, at Cambridge; and he would rather see any individual building in this kingdom perish than that chapel, which to his mind was the perfection of form, of mathematical science and calculation. If anybody would take the trouble to get up to the groining, or to go to the choir, and look into the stalls, he would see not only wonderful form and balancing of weights, but the most exquisite detail; many of the carvings being equal to anything which Benvenuto Cellini ever did. There was a wonderful amount of talk about a new style; but why did not somebody produce it? There was enough of iron and glass for the purpose; why not do it, instead of merely talking? As one of the oldest members of the Association, he congratulated them upon the meeting of that evening; on the steady progress they had made; and on the resuscitation of the body from all their former difficulties. He believed they were now upon a firm footing, and might take credit not only for having established an Architectural Exhibition, but for introducing the ladies to the dry details of architectural subjects. He had great pleasure in proposing a vote of thanks to the president for his able conduct in the chair.

The motion passed by acclamation.

Mr. Hayward gave a short explanation of the rules recently adopted by the Institute of British Architects, affording access to their library to "temporary students." Gentlemen who had applied for lists of the books to be used in the examination next January, must have seen that they contained the names of books in the library of the Institute. The Institute would be glad that greater facilities existed for obtaining access to these books; but there were certain rules which they could not in any way alter; and these rules prescribed the manner in which access was to be obtained to the volumes.

The Chairman said he was sure those present must all have congratulated themselves on hearing the speeches which had been delivered that evening. The formal business of the Association was now at an end for the evening; and the remainder of the proceedings would be left in the hands of the professors of a sister art, who had kindly consented to entertain them.

The musical arrangements for the evening were then entered upon; and the visitors had every occasion to feel obliged to the following artistes, who kindly gave their gratuitous services:—Madame Gilbert, Miss Susanna Cole, Miss Palmer, Miss Beckingham (a promising pupil of Madame Gilbert's), Mr. John Morgan, Mr. Wallworth, Mr. J. Cheshire, Mr. W. Evans. Conductor—Mr. Alfred Gilbert.

THE LANCASHIRE DISTRESS.

Each week the news from Lancashire has a more gloomy aspect: constantly the distress is deepening; and although soon after the suspension of a considerable amount of labour the Registrar-General's health-bill showed a decrease in the number of deaths, this is chiefly to be attributed, as we have before mentioned, to the unusual care which the women out of work were able to bestow upon their children. We fear, however, that ere the winter has passed we shall have to record a less satisfactory state of health; for almost invariably, in both old and modern history, do we find fever and sickness closely connected with a short or famine supply of food: the bodily stamina becomes decreased, and is rendered more susceptible of the evil effects of bad drainage and atmospheric impurities. Besides, there is danger in the necessity which obliges the poor Lancashire workers to contract the accommodation of their homes; and, as the coldness of the weather increases, there is increased danger in consequence of the short and insufficient supply of clothes, bedding, and firing, causing the people to close all apertures and render their homes nurseries of typhus and other disorders of this class. We hope that in this instance we may prove untruthful prophets; but so generally certain are the rules of health, that we trust every endeavour will be made to increase the quantity, and give variety to the food supply which is needed for feeding so many thousands, so that they may be better able to bear up against disease.

But, besides this, sanitary precautions should not be neglected. We trust that a supply of winter clothing will be forthcoming, and that every opportunity will be taken to instruct the people as to the danger of overcrowding, particularly if accompanied with want of ventilation.

In order to increase the supply of food, far larger subscriptions will be required; for it is to be feared that the distress, having affected so many parts of this population, it will, without borrowing, be impossible to increase the relief granted by the parishes. The extent of the demand is enormous. We hope to be able next week to give some information as to the actual sanitary condition of the people.

HEALTH OF THE NAVY.

The statistics of the sanitary condition of the navy for the year 1859 have just been published.

The total mean force afloat during the year was 52,825 of all ranks and ratings. The number of cases of disease and injury placed on the sick-books was 81,325, or in the ratio of 1540 2 to 1,000 of mean force. The number invalided was 1,994, and dead, 886; in the ratio per 1,000 respectively of 37 7 and 16·7. As compared with previous years these numbers are said to show a decrease under each head; although in 1859 the number of wounds received in service in China and of cases of death from yellow fever in two vessels on the West Coast of Africa had the effect of making these proportions greater than would otherwise have been the case.

Tables are given which show the distribution of these totals among the various stations, including the irregular force, or vessels going to and returning from stations or despatched on special service. From these it appears that the average number of daily sick is lowest on the Australian and Cape of Good Hope stations; being 42·1 on the former and 44·7 on the latter; and highest on the East India and China station; being 94 6, or nearly 10 per cent. of the whole force. On the North America and West India, the Home and Mediterranean commands, the losses were respectively in the ratio of 49·9, 50 2, and 51 5 per 1,000, or about 5 per cent.; and on the Brazilian station the per-centage was 5¼. The ratio on the Pacific is 65, a little in excess of the West Coast of Africa, which is 63·6.

The proportion to be ascribed to various classes of diseases of the average daily sick is;—for diseases of the respiratory organs, 367, though half this sickness is ascribed to common cold or sore throat; for diseases of the stomach and bowels, 243 (a large proportion belonging to the Chinese service); for rheumatism, gout, &c., 247·6; for diseases of the eyes and ears, 49·5; for genito-urinary diseases, 542, or 10·2 per 1,000 of mean force, equal to the removal from the effective strength of the navy of the entire crew of a 50-gun ship; and for diseases of the skin and cellular tissue, on which the greatest loss has taken place, 782, or equal to the crew of a ship of the line or second rate.

The total number of days' sickness in the navy has been 1,145,529; and, dividing the latter by the number of days in the year, the quotient shows the number of persons daily inefficient, or on the sick list, to be 3,138 (out of 52,825). These results show "how necessary it is to husband well the health and strength of those on whose efficiency depend not only the safety of the ships in which they sail, but it may be the safety and honour of the country.'

THE LICENSING OF COW-SHEDS.

In the parish of St. Pancras alone application has been made for licenses for more than ninety cow-sheds. On inspection some were found to be in the most filthy condition, poisonous to the surrounding neighbourhood, and unfit in space and other accommodation for the animals. A large cow-shed near Argyle-square was greatly complained of by the inhabitants of that neighbourhood, who were obliged to keep their windows shut, and even then the smell was unbearable: lodgers had left in consequence; and for other reasons the place was reported to be a nuisance. Notwithstanding, this shed is better than many, being ventilated at the roof, &c. Obstinately opposed to any improvement as most of the London cow-keepers were, now that this most useful law has come into operation they seem willing to set their places in order; and the medical officer has advised the use of a little patience, in consequence of the short time which has elapsed since this Act was passed; and in doubtful cases the magistrates have determined to inspect the premises.

Although under the present circumstances we do not object to forbearance, it is to be hoped that after a short time the provisions of this Act will be firmly carried out. This, indeed, will be to the advantage of the cow-keepers and their neighbours, and a necessary act of mercy to the pent-up animals. If with care these places cannot be kept pure, they must eventually be removed. Might it not be worth while to try some of the disinfecting means, which are said to be cheap and effective?

While inspecting the cows, let us hint that it would be well to see about the pigs, for there are many more of them, in places where they have no business, than is generally supposed.

MUSIC AND THE DRAMA.

Royal English Opera, Covent Garden.—"Love's Triumph," composed by Mr. Vincent Wallace and written by Mr. Planché, was produced on Monday evening last with remarkable success. The house was crowded to the ceiling, and the repetition of the greater number of the solos, duetts, and concerted pieces was compelled by the unanimous and spontaneous nature of the demand. "Though all too poor the painter's art," and "Night, Love, is creeping," ballads sung by Mr. Perren, who, with a good voice, is a poor actor; "Carelessly cantering down a lonely dell," and "Those withered flowers," by Miss Louisa Pyne; "I'm a model page," by Madame Laura Baxter; the trio, "For me if you would garlands twine," by Madame Baxter, Mr. Weiss, and Mr. Henry Corri, whose acting in the piece is excellent; a choral part song without accompaniment, "Corin, for Cleora dying"; and the sestet, "In mystery shrouded," are amongst the gems of the opera. Miss Pyne, who plays two parts,—a princess and a burgomaster's daughter,—leaves nothing to be desired. Mr. Harrison, with less singing to his share than usual and more acting, materially conduces to the success of the opera. He will probably do more hereafter with the buffo song, "Patience, Prudence, Circumspection." The music, as it seems to us from one hearing, is remarkable for a flow of melody rather than scholarship. The libretto is admirably written, terse, pointed, and elegant, and should lead our composers to insist on something better than the slipslop to

which they are content to wed their music. When we remember, however, that Mr. Planché's ability in this direction has never been called on to aid since he produced "Oberon" (a model opera-book), the desired result is not so certain as might be expected. A little appropriate dancing and some pretty groupings at the end of each act assist in producing a successful whole.

The Princess's Theatre.—The new management have strengthened the company, and made it strong, by the addition of Miss Amy Sedgwick, who has been playing in the "Love Chase" and the "Hunchback." The latter play is exceedingly well done, notwithstanding that a younger heroine is desirable. Mr. Marston, Mr. Belmour, and Mr. Vezin give due force to the parts of *Master Walter*, *Fathom*, and *Clifford*; and Miss M. Oliver's *Helen* is unaffectedly charming. A new piece will be produced on Monday.

The Music of the Future.—We allow a correspondent, A. W., who has before written as to Wagner's music, to state his own views, for the sake of discussion:—"In former letters I have called your readers' attention to Wagner's music, and I would now turn especially to what seems to me the inconsistency of the *Athenæum* in its criticism upon his works. This paper usually bestows great praise upon the Pre-Raffaellite paintings; but the musical critic never ceases to sneer at Richard Wagner. The Pre-Raffaellite and Gothic architecture movements arose from the desire to oppose the academic conventional manner of treating nature, and from the wish to found a system of building upon true constructive principles. In like manner Wagner laboured to found a school of music untrammelled by the laws of melody taught throughout Europe. The critic I speak of never ceases to insinuate that Wagner cannot write melody; and to this I must answer, that Wagner never intends, nor has he any thought of, writing melody in the commonly accepted sense. He holds, that by the ordinary form of melody, the musician cannot aid the poet to express the sentiment of the words to the extent necessary; that he cannot vary in expression to the same extent as the poet; that he is, therefore, confined and cramped; that if he is confined to the ordinary form of melody he cannot write music *descriptive* of sentiment; he cannot paint in music as the poet paints in words. There is more descriptive effect in a chord than in a single note. Therefore, according to Wagner, poetry, in an opera should be aided by a web of tone, a continuation of chords to express the meaning of the words. His music is thus a descriptive symphony, without any melody, in the ordinary meaning. The singers recite the words of the poem, the orchestra aids the latter by this web of tone. Poetry being the nobler art, music is second to it, or rather equal with it; both working together to represent the legend. This, I believe, is the true and natural aim of music. Some critics are constantly crying out against modern singing; comparing it with the past age—with the Rossini singers. Now, I maintain, in common with Young Germany, that these singers were not good; that their voices were spoiled by the continued bravura singing. The perfection of execution of these singers I can compare only to the machine-like polish and finish of modern work. Of Rossini's melody I can only say that it was written to please by itself, to tickle the ears; that it has no moral aim; that there is no attempt to aid the poem; that modern Italian operas are nothing but a certain quantity of airs strung together, without any attempt at forming a continued poem in music. These views, put forward by Wagner, are entirely opposed to all received notions of music, and in the end they will triumph, I doubt not, because founded on nature and truth. Moreover, they are the earnest convictions of an earnest man. Any one may imagine how quaint and grotesque a comic opera written on his principles will be, and how grand a legendary opera. Two fine specimens will be his, 'Hans Sach' and 'Tristan and Isolde,' when produced, as they will contain the full developement of his system, which is only partially heard in his 'Tannhaüser' and 'Lohengrin.' Of old music, more or less illustrating Wagner's principles, I may mention Palestrina's, but especially Beethoven's 9th symphony, and the D Mass. The Mediæval French music, and the earliest known English, are excellent as simple works, descriptive of the sentiment of the poetry. All the German opera composers, such as Mozart, Gluck, Weber, have worked more or less on the Italian model, and cannot be said to have done anything for *nature* in music. What I desire to see is fair play, and with this I have no doubt Wagner will gain for himself esteem in this country."

METROPOLITAN BOARD OF WORKS.

THE report of the Metropolitan Board of Works, pursuant to the Act of Parliament of 18th and 19th Vict., c. 120, s. 200, presented to the board 15th August, 1862, has just been published. The document is of considerable length; but as we have ourselves given very full reports of the progress of the drainage works and other improvements of which it chiefly treats, we need not at present go into the subject at any length. We may merely revert briefly to the state of the drainage works generally, according to the report of Mr. Pollard, the clerk to the Board.

Of the three great sections into which these important works have been divided upon the north side of the river, one is actually finished, a second is half complete, and the third is well in hand. The first, or northern high-level sewer, extending from the Gospel Oak-fields at Hampstead to Old Ford on the river Lea, is completed throughout and in full operation. Of the middle-level sewer, which forms the second portion of the work, and is about twelve miles and a half long, about half is actually finished. The most important of all the sections—the low-level sewer—has been unavoidably delayed by the ambiguities which have beset the formation of the Thames Embankment. From Whitehall to Blackfriars Bridge it will be constructed within the new embankment, and will thus avoid the Strand, Fleet-street, and Cannon-street.

On the south side, the two great lines of sewer are commenced, but neither is in so forward a state as those on the north side.

There is one point in Mr. Pollard's report to which we may more particularly advert;—namely, as to the district surveyors' returns of building operations. The result of the monthly returns for the year 1861 is given as under:—

Works.	Building Operations.	Fees.
New buildings in 1861, in respect of which fees have been received	4,395	£8,266 1 3
Additions, alterations, and other works, in respect of which fees have been received	4,723	5,168 1 11
Arrears of former years received:—		
New buildings	2,816	5,794 2 6
Additions and alterations, &c.	2,074	2,357 17 0
Total works and fees thereon, during the year ending 31st December, 1861	14,008	£21,586 2 8

This total is not precisely correct, considering that it includes arrears of former years, the fees of which amount to 8,151*l.* 19*s.* 6*d.* out of the sum total of 21,586*l.* 2*s.* 8*d.* The fees for the year ending December 31st, 1861, therefore, strictly speaking, only amounted to 13,434*l.* 3*s.* 2*d.*; but then, on the other hand, there are the arrears of 1861 to be considered.

PRIZES OFFERED BY THE INSTITUTION OF CIVIL ENGINEERS.

SESSION 1862-63.

A LONG list of subjects for essays on which premiums are offered has been published. We select a few. For the first three, pecuniary awards will be made, not exceeding in each case twenty-five guineas, in addition to the honorary premiums:—

Accounts of existing water-works; including the source of supply, a description of the different modes of collecting and filtering, the distribution throughout the streets of towns, and the general practical results. (Twenty-five guineas.)

On the results of the use of tubular boilers, and of steam at an increased pressure for marine engines; noticing particularly the difference in weight and in speed, in proportion to the horse-power and the tonnage. (Twenty-five guineas.)

On the manufacture of large masses of iron for the purpose of warfare, as armour-plates, &c. (Twenty-five guineas.)

On the manufacture of bricks by machinery, and their comparison with hand-made bricks.

On the methods of constructing foundations for large structures, in deep water, and on the various systems of driving piles.

On the construction of suspension bridges, with rigid platforms, and the plans of anchoring the stay-chains.

On the various modes adopted for moving earth in tunnels, cuttings, or embankments, with the cost.

On the mechanical methods of boring and of sinking large shafts; of introducing the tubbing and the impervious lining; and of traversing running sand and other difficult strata.

On the drainage and sewerage of large towns; exemplified by accounts of the systems at present pursued, with regard to the level and position of the outfall, the form, dimensions, and material of the sewers, the prevention of emanations from them, the arrangements for connecting the house drains with the public sewers, and the disposal of the sewage, whether in a liquid form, as irrigation, or in a solid form after deodorisation.

On the construction of tidal or other dams, in a constant or variable depth of water.

VENTILATION AND WARMTH.

THE season for blazing fire-hearths has now set in; and the hard inhabitant, rather than admit the chill atmosphere, will totally exclude it. Many modes of moderating its access have been practised. Louvre openings of glass have long been in use. A new patented appliance of the same character, covered with wire gauze, or perforated zinc, has also been presented to the jury; but none of these are considered worthy of a prize, since it is cold air that is admitted by them; and rather than admit air at the external temperature, when the thermometer is down to about 45°, the inmates of houses in our clime will rather exclude it in totality.

There are several varieties of heating and ventilating stoves in use for large structures, and even for warming the halls, staircases, and galleries, or corridors, of large houses. These, to a certain extent, do secure a genial atmosphere, by keeping up fires specially for their use and object; but on visiting the Architectural Gallery, Conduit-street, the writer was struck by the models of two stoves, one for large buildings, or for mansions whose separate fire-places are constructed for their use; the other for small houses, or sets of chambers. In these a new system, or rather a new application of old principles, is adopted. The air is admitted in full volume below the range or floor: it is collected in a chamber or cavity around the stove; and for some height in the chimney-shaft a tubular smoke-flue ascends from the stove (into which it is close-shouldered), thus forming a hot-air chamber of the ordinary smoke-flue; and from this chamber, stopped off at any desired height, warm-air ducts are directed to the chimney itself, or to other rooms, for the purpose of ventilation.

From the constant supply of fresh atmosphere, and its free distribution, the air thus served is not burnt, nor deprived of its life-sustaining properties; and the small iron flue of 6 or 8 inches in diameter is found to carry off the smoke more effectually, a great part thereof being consumed, and this also aiding in combustion, whilst it provides a perfect immunity from smoke.

Where it is desired to raise the temperature a blower is applied; so that any moderate and sustainable degree of heat may be attained; the whole system of air tubes or conduits being under perfect control, so that the supply can be regulated.

In the larger model stove there is a coil of hot-water pipes, which is enclosed in a chamber, and made to serve any other rooms, halls, or staircases, or adjoining buildings, that may be designed in construction. Having studied the subject, on further inquiry, and reference to the houses in which these new stoves are applied, I was surprised at the equability and geniality of the temperature, and more especially at the fact that there is not the slightest taint of burnt air perceptible from the smaller cottage or room stove; and still more, that the quantity of fuel in combustion, and producing such results, was no more than an ordinary fireplace might consume,—in fact, a mere hatful!

These models were not at the Exhibition, and therefore have not come under notice of the jurors. Would it not be worthy the attention of large stove manufacturers to take up these simple but efficacious stoves; to make them ornate and attractive, as they please; but also to turn out a number at a cheap rate; suitable for the private chamber and the poor man's lodging, with a handful of coals? QUONDAM.

THE CASTLE AT HEIDELBERG.—These interesting and beautiful ruins have been damaged by the construction of a tunnel under the castle for the Neckar Railway. The promptest and most efficient means should be adopted to secure them. The tunnel should not have been permitted there.

THE VENTILATION OF SHOPS,

OFFICES AND WORK-ROOMS.

Sanitary conditions which we now think of with complacency will be looked upon by the coming generation with feelings of surprise not unmingled with disgust. We recently printed some notes on the ventilation of cellars which excited surprise; and investigation will show that, particularly in the old parts of the metropolis, there are, notwithstanding the alterations which are going forward, many shops so constructed as to add to the evils which are likely to arise from the neglected state of the cellars.

In many situations, such as the narrow and crooked streets which are near St. Paul's Cathedral, particularly on the south side, the carrying out of proper sanitary arrangements is a matter of difficulty; but in all cases much good is to be done by making the necessity for alterations clear. In these parts there are chandlers' shops, for example, in which candles, bacon, cheese, soap, butter, red herrings, and a hundred other miscellaneous articles, are thickly stored. In most instances, although the fronts may have been improved and modernized, the interiors are unchanged. Generally, the ceilings are low, and the shop extends as far as the space will allow until it comes in contact with the adjoining premises. What has been originally a small back yard has been built over. In some cases a skylight has been provided; in others not; but often where there is a light, it is made so that it cannot be opened,—in order, as the tenants say, to prevent the visits of thieves. Even when the skylight is made to act as a ventilator, it is not used.

An examination of a number of these premises shows that, originally,—say at the time of the rebuilding after the Great Fire of London,—they were not intended for shops; but, as the requirements of the neighbourhood demanded it, the ground floor of the dwelling-house has been transformed into a place of business. In some houses a passage has been left, which allows a separate entrance to the dwelling-rooms; but more frequently the passage has been, at some time or the other, joined to the shops; and there is no communication except through this with the upper apartments.

If chandlers' shops are bad, those of the butchers are often worse. The accompanying engraving represents a characteristic example of the arrangement of many business premises in different parts of the metropolis. A is the cellar, in which are the closet, water-tank, pickling tubs, &c.: B is the shop; C a small office, which has been built upon what was once a back-yard. This is lighted by one of the skylights to which we have referred. This little apartment has been built out close to the wall of the neighbouring house. E is the kitchen, which is situate as many City kitchens are, on part of the first-floor: D is a sitting-room. The way to these is from a dark, narrow, and inconvenient staircase, leading from the shop. F F are bed-rooms. A worse arrangement than this can scarcely be imagined. All the bad air collected in the cellars must pass to the shop; for, except by a small grating in the front, there is no other means of exit.

A Cut through a House in the City.

In a butcher's shop, in the day-time, the unglazed windows admit a good supply of air; and provided that openings are left through to the back, there is sufficient current; but it is not so with some other shops, in which the windows are glazed; and where, often, particularly in cold weather, the door is kept nearly or entirely closed. To return to our illustration. Into such cellars as that shown in the sketch, sheep are pushed down, and other animals slaughtered. We trust, however, that the law which enforces the licensing of slaughter-houses in the metropolis, and their regular inspection, has put a check on such disgraceful practices. Apart from these, however, there is much impurity in such cellars. Some are infested by large rats, which find their way there from sewers and broken drains; and if the rats can come so, the foul air is sure of a passage also.

At night, and during Sundays, the shop is closed by shutters; and at night the sky-light is fastened for fear of thieves. At times, occasionally on Saturday nights, quantities of meat are left unsold; and in the summer, and in dull, heavy weather, it is by no means unusual by the Monday morning to find this stock green, putrid, and quite unfit for food. This material vanishes in the morning; for although it is unsaleable by the butchers, and unfit for food, it notwithstanding finds a market; and we fear is often, in a highly seasoned state, sold in the shape of sausages. This trade should be more closely watched. Now, it is evident that, what with the cellar and what with the shop, those who dwell above are not well placed. The floors of those old-fashioned houses are saturated with grease; and there are other things, such as boxes for waste fat, collecting for the tallow-chandler, which cannot well, under the circumstances, be otherwise preserved; or it would surely be done; for it is evidently to the advantage of the butchers to attend most scrupulously to cleanliness, as nothing sooner taints all kinds of animal food than want of attention in that respect. Some modern butchers' shops are spacious, and thoroughly ventilated: the floors are of stone, and the walls of a polished substance, so that they can be thoroughly washed with water and easily purified.

To a greater or less extent, the remarks above made apply to other shops of a similar construction; and we have been led to make them because, at no great cost, the healthiness of such houses and shops might be much improved. The cellars should be kept scrupulously clean: if it be a necessity that the ashes and dust should be there, a dust-bin with a tight-fitting lid should be fixed, and that should be emptied once or, if it can be done, twice a week: the ground should be flagged; the sinks and closet trapped in the most effectual manner; the front grating enlarged to the greatest possible extent, and the place lime-washed at least four times in the year. This would sweeten the superstructure; and then every means should be used for keeping up a good current of air through the shops, during both night and day. This might be to a certain extent managed by perforated glass in both the windows and skylights; or, where it is possible, by openings at the back, and by open iron gratings over the doors, which might be so constructed as to defy thieves and prevent the admission of rain and snow.

"A Sufferer" complains of the close and unwholesome state of many architects' and engineers' offices, which he has occasion to visit on business; but especially of the assistants' offices, which are frequently quite offensive. Now this is not only selfish, but it is stupid, and quite inconsistent even with an intelligent selfishness; inasmuch as the vigour of the brain depends directly and immediately, as well as momentarily and continuously, on the proper sëration of the blood; and if employers could only see or estimate the actual shortcomings and losses to themselves from such a source, they would probably be more desirous of providing a free supply of that cheap commodity, fresh air, to their assistants than even to themselves. They may depend on it their contempt for such considerations does not arise from superior sagacity on their parts, but from superior ignorance of the inevitable laws of physiology, and of health and vigour of brain and body. In the case of foolish slave-ship captains, who stow their poor slave passengers under close hatches, and kill them by hundreds from want of fresh air, were some intelligent underling to warn any one of them that the want of fresh air was the cause of the deaths, we doubt not he would be snubbed for his impudence, sneered at as a pragmatical and conceited fool, and his advice or entreaty despised; but how evidently it would have been for the benefit of the owners, as well as of the slaves, to have given the utmost attention to such advice, there are few who cannot see. Why, then, should employers of all kinds be so stupid as they are in respect to the welfare of those, the value of whose higher labours is far greater than that of mere slaves; and although there are but too many masters who care little whether their servants be killed by slow degrees while serving *their* purpose, such masters ought seriously to consider whether their purpose really be best served without regard for the health and vigour of those dependent on them for a livelihood.

THE MANCHESTER ALBERT MEMORIAL.

Our readers are already informed of the character of the structure designed by Mr. Thomas Worthington, in which it is proposed to place the statue of the lamented Prince Consort, executed by Mr. Noble, and presented to the town by the mayor, Mr. Goadsby. In laying before them, however, a view of the memorial, it may be desirable to repeat the description already given. The structure consists of an open, arched, and four-sided canopy, within which the figure stands upon a high pedestal. The base of the erection rests upon the top of a flight of five steps, and is protected by a grille of metal-work, perhaps of bronze, divided into compartments, and filled with quatrefoils. The basement is divided into two stages, the upper of which, on each side, contains five panels enriched with armorial bearings. Each corner of the basement supports a pier, ornamented with a shield, emblazoned with the arms of the Prince, surmounted by a coronet. At the inner edge of the piers are clustered spiral columns of marble, with elaborately-foliated capitals. The mouldings of the four arches, also of spiral work, like the columns, spring from the capitals of the piers; and running along the under edge of the arch will be a cusping. Above each arch rises a gable, adorned with crocketings on its outer edges, and terminating with the figure of an angel blowing a trumpet. The gable is pierced with a circular opening, enriched with light tracery, and filled with two intersected triangles. The three spandrils of each gable will be filled with arabesque work, in basso-rilievo. Each of the four piers supports a pinnacle in two stages, the lower of which is decorated with spiral marble columns. The upper part of each pinnacle consists of an open canopy, elaborately adorned with crocketings, finials, and lesser pinnacles, supported by spiral columns, and sheltering a small emblematic statue. From between the gables rises a small octagonal spire, to a height from the ground of 75 feet, where it is terminated by a metal crown. "The style of the structure is that which prevailed in Florence and throughout Tuscany between the ages of Brunelleschi and Giotto." The length of the steps at the base is 35 feet. The base of the memorial proper at the top of the steps measures 19 feet on each side. Height of basement, 13 feet 6 inches; pedestal, 21 feet; figure, 9 feet. The total cost will be about 5,000*l*.

The view represents the memorial as placed in the centre of the Infirmary esplanade. But since the committee decided to place the memorial there, the question of site has been generally discussed, and an opinion exists that the prevailing vertical lines of the Mediæval structure would be discordant with the horizontal lines of the Ionic portico of the Infirmary.

It has been suggested that a suitable site might be obtained at the junction of Portland-street with Piccadilly, by cutting off the acute angle of the Infirmary grounds and forming a large triangular paved "place," in the centre of which the memorial might stand, leaving a street all round

THE PRINCE CONSORT MEMORIAL, PROPOSED TO BE ERECTED IN MANCHESTER.

MR. WORTHINGTON, ARCHITECT.

it equal at least to the width of Portland-street. If so placed, the memorial would be a striking object approaching from Oxford-street; and, being altogether detached, would separate itself completely from the adjoining buildings and statues.

As opinions differ on this point, the committee have determined to put up a wooden framework, or skeleton outline, of the memorial, in the centre of the esplanade; boarding the solid portions; in order that the actual effect may be judged of. Had this discussion as to site not arisen, the foundations would now have been in progress; Mr. Worthington being anxious to get this part of the work advanced, and time allowed during the winter months for consolidation before commencing the superstructure. We agree with those who object to the esplanade, and incline to the last-named site. The proposed rough model will scarcely show the discrepancy that would be apparent if the memorial were erected in front of the Infirmary.

HOME AND FOREIGN TRAVEL.

Of the five or six millions of visitors who will have been attracted to the International Exhibition, many will have gained most valuable information, which will not be without effect on our manufactures, artistic and otherwise. But this is not the only advantage; for numbers who have come from the provinces and from foreign parts have extended their investigation to the great works of the metropolis. Many foreign citizens and apprentices, too, have been enabled, by assistance of their Government, to make tours of inspection to the scenes of various kinds of industry in which they are interested throughout this kingdom. This national expenditure will not be lost; for besides the teaching which in this way will be obtained, there will be a stimulus given, by this selection of well-conducted and clever men and youths, to the whole class of skilled workmen throughout France, Germany, Italy, and elsewhere.

When we remember the jealous exclusion practised by a large body of manufacturers only a few years ago, when most of them had secrets on which they considered their success depended, and that the works were as closely guarded as a beleaguered castle in the olden time, we think with pleasure of the change which has taken place. Our greatest manufacturers, at some trouble, now throw open their establishments to those who are likely to take an intelligent interest in them.

While thus gladly welcoming those connected with foreign industry, we should not neglect to avail ourselves for our own workmen of similar opportunities which may be offered in France, Belgium, Germany, and elsewhere; but take advantage of the International Exhibitions which may be opened, and of invitations which may be offered to our workmen, to see what can be usefully gathered from abroad. But in order to enable Englishmen to do this with complete effect, it is very essential that they should be able to speak the French language with some degree of fluency. In many parts of London, and in all important towns, there is, in connexion either with the Mechanics' or other institutions, opportunity for young men learning this and other valuable branches of education after the hours of labour; and it must be borne in mind that in the case of selection of persons for foreign travel, those will be chosen who are best fitted, by their skill, education, and character for perseverance, for such missions.

While acknowledging the great value of foreign travel, we fear that matters at home have been by far too much neglected, particularly by the educated classes. During the progress of Mr. Gladstone through parts of Northumberland and Durham, the Chancellor of the Exchequer repeatedly expressed his astonishment at what he saw. He contrasted the ancient castle at Newcastle-upon-Tyne, which has stood for about 800 years, &c., with new and modern wonders, which every way met the eye. The great manufactories of engines of all kinds; others for the making of electric cables; chemical works, of an extent which could scarcely be credited without being seen; ship-building yards, for iron and other vessels of war and the merchant service; Sir William Armstrong's manufactory for rifled cannon; marine and hydraulic and other engines; Stephenson's works; glass works; anchor and chain makers; docks of immense extent; and colliers, and fleets of vessels engaged in various trades: besides these were coal staithes and drops, from which the multitudes of waggons coming by railways from the inland collieries are unloaded; the high-level bridge, and buildings of either one description or another, stretching, almost without a break, from below Newcastle to the bar of the sea, a distance of about twelve miles, where the busy hands of man are contending with the ocean in making a harbour which it is hoped will not only prevent the loss of life and property on this dangerous coast, but also be of advantage to the Port of Shields and River Tyne. All this is marvellous, and it is more wonderful when looked at in detail, and it is remembered that the greater part of all this industrial progress has been made within thirty years.

Nor are the great labours of other parts of Northumberland and Durham; of Birmingham and its neighbourhoods; of Sheffield; the Yorkshire cloth works; the mills of Lancashire and Cheshire, which we wish soon to see busy again; the vast mercantile trade of Liverpool, and a hundred other matters which might be mentioned, less worth the study, particularly of those who, when college or school life has ended, have some time to spare before commencing those duties to which they are devoted, and which for some years will hold them tight and tighter. Nor are such journeys without pleasure. We have cathedrals and churches, and picturesque landscapes and seacoasts to be looked at; and, while this home-travel is being performed, the wayfarer has an opportunity of forming an estimate of the varied character of his countrymen. In one sentence, while foreign travel has undoubted advantages, a knowledge of his own country and its productions, gained by careful personal examination, should be considered absolutely necessary by every Englishman who has health and his senses.

COMPETITIONS.

Malvern Proprietary College Company. — Dr. Stummes writes,—"I wish to correct an erroneous impression current amongst the competing architects of plans for the College buildings, that the successful architect is obliged to take a certain number of shares. The instructions and conditions to architects do not contain such an absurd stipulation."

Albert School and College, Suffolk. — The sixteen designs sent in have been exhibited for ten days. The majority are Gothic: the sum to be spent is 10,000*l.* The competitors are Mr. Wilson, of Bath; Mr. Peck; "East Anglian;" Mr. R. M. Phipson, Ipswich; Mr. E. S. Blackburne, London; Mr. E. Ellis, London; "Fiat;" Elmslie, Franey, & Haddon, Parliament-street; "Aut disce, aut discede;" "Probatum est;" Mr. A. Allom; Messrs. Habershon & Pite; and "Excelsior." An architect, well known, has addressed to us a statement of certain doings in this matter, as between the secretary and the design of his relative, a Maidstone architect, the publication of which would probably subject us to an action for libel. We must content ourselves with advising the committee, which includes men of the greatest respectability, to exercise an unbiassed and impartial judgment.

Leicestershire Militia Buildings.—The committee offered a premium for the best design for buildings on a specified site; and have awarded it, we are told, to a plan suggesting the erection of the cottages required round a different site!

Rhyl British Schools.—The committee for the intended British Schools have selected the designs of Mr. F. D. Johnson, of Bennett's-hill, Birmingham.

CHURCH-BUILDING NEWS.

Market Rasen.—The church of St. Thomas the Apostle has been restored and re-opened. The tower and some parts of the chancel are now the only portions of the old edifice remaining, except some of the best portions of the nave, which have been incorporated with the newly restored parts. The entire body of the church has been either renovated or restored. A portion of the old nave walls has been restored, and a new chancel arch erected, with pillar caps enriched with figured mouldings. On the north are four new windows, three on the south, two on the west, and one large eastern window above the communion. These windows have hoods and bosses of grain, fruit, and flowers, carved by Mr. Scrivens, of Doncaster. The clerestory windows are eight in number, all new, with bosses and heads. An organ chamber has been built over the vestry, in the eastern part of the south aisle: this communicates by a triple arcade of pointed arches and pillars with the chancel. The bell-house is now open to the nave, showing the whole of the tower-arch. The roof is open, and constructed of red pine stained, covered with slates and Staffordshire ridging. The flooring is of Minton's tiles. The seats are open benches throughout, of pine (hereafter to be stained). The gas-fittings have been furnished by Mr. Oliver, of Louth. Two bells have been recast by Messrs. Warner, of London, and the whole re-tuned. These, with the glazing of the western window, are the only alterations made in the tower. The rough stone used in building the walls, has been given by Mr. H. R. Boucherett, of Willingham House. The windows are of Ancaster stone, from the Park Spring Quarries. The entire work has been executed by Messrs. Smith & Binns, of Lincoln, under the direction of Mr. Fowler, of Louth, architect.

Kibworth.—The re-opening of Kibworth Church, St. Wilfred's, has just taken place. Though this re-opening has followed the restorations that have been recently effected, says the *Leicester Advertiser*, it was intended also to serve as a commemoration of the various works of improvement or restoration which have been gradually going on for several years. When the tower and spire fell down in 1825, carrying with them the tower arch, this latter was never restored, but a plain whitewashed wall formed the west end, shutting out the tower and west window. An entirely new tower arch has now been constructed, and the west window improved. Two new buttresses have been built in the angle of the tower outside. The ceiling and old roof of the nave have been replaced by a new open roof, leaded rather higher than the original pitch. The clerestory windows have been repaired and scraped, showing for the first time the stonework. The walls have been relieved of their whitewash and rough stucco. The chancel and the gable of the nave have been rebuilt and raised with new coping and gable cross. Two windows have been opened on each side of the chancel arch, and have been filled with stained glass, the gift of Mr. W. Slater, the architect: one is a diamond-shaped four-light quatrefoil window, the other a square three-lighted one, with Flamboyant tracing. Both were blocked up probably for many generations. The porch windows, also hitherto blocked up, have been opened, and glazed with green cathedral glass. An ancient stone staircase leading from the floor to the top of the screen has been restored to view. About 780*l.* have been expended, raised by voluntary contributions, which, with the restoration of the chancel, which cost more than 300*l.*, and the earliest improvements in the church above mentioned, make a total of about 1,150*l.* expended on the church, independently of the open seating and new interior fittings.

Northfleet.—The vicar and churchwardens of Northfleet have for a considerable time past had it in contemplation to restore the chancel of this fine old parish church; and the consent of the trustees of the late Mr. E. Murrell (who are bound to repair the chancel only) having been obtained, the work of restoration has commenced under the supervision of Mr. E. Godwin, architect. The present pews will be removed, and the level of the floor will be altered. The estimated cost of the proposed restoration will be about 500*l.* or 600*l.* If sufficient funds are obtained, a stained glass window will be placed at the east end, which will be erected as a memorial to the late Prince Consort. The nave of the church was restored about eleven years ago, and a set of gates have recently been erected at the entrance to the graveyard.

Leigh (near Tunbridge).—The church here has been restored, or rather rebuilt. The galleries have been taken away, and a new tower built of Kent rag and Speldhurst sandstone dressings. The stone has been given by Mr. Chas. Powell, of Speldhurst. A new vestry has been built: the roof and the whole of the fittings are new except the pulpit. Mr. Charles Bailey is the honorary architect. Mr. H. Constable, of Penshurst, was the builder. The chancel has been rebuilt from designs of Mr. George Devey, architect; and the work has been done by Mr. H. Constable also.

Southampton.—St. Paul's church has been consecrated. The church has been enlarged with the view to providing free accommodation for the poor, to the extent of 300 sittings. Mr. Snook was the builder, and Mr. Brain the stone-carver employed. The east windows were by Messrs. Warrington & Sons, of London. Mr. Edmund Scott, of Brighton, was the architect who designed and superintended the whole work.

Bettiscombe.—The parish church here has been consecrated. The style of the new building is Early Perpendicular, after the type of its predecessor, but more elaborate in detail, and of so much greater dimensions that it will now conveniently accommodate a congregation of 160 on the ground floor, instead of only 90 as heretofore,

even with the aid of a gallery; while the high pews have been substituted by open seats. Three of the old windows have been preserved and re-inserted; one in the west face of the tower, which opens immediately into the nave, and the others on each side of the chancel. On the north side of the nave an arcade of three arches opens into the aisle, the piers consisting of clustered pillars with moulded caps; and, besides the nave and this north aisle, there is a chancel, with vestry on the north side, besides a porch on the south, and a tower at the west end. The walls are built of flints in random work, with bands of native stone, though the arches, doors, &c., are of Ham Hill. Open-timbered hammer-beam roofs give height to the nave and aisle, the corbels being carved into designs of fruits and flowers; and the roof of the chancel is also of open-stained deal, though the ribs are arched and somewhat pointed, springing from moulded corbels. The east window, it is to be hoped, will be filled with stained glass, as two have already been promised for the chancel by Mrs. Scott, widow of the preceding rector, as well as the third by another benefactor. Mr. J. Hicks, of Dorchester, was the architect, under whose superintendence the work has been carried out by Mr. E. Brooking, of Weymouth; the carved work having been executed by Mr. Burge, of Chiselborough.

Worfield.—The church of Worfield (between Wolverhampton and Bridgnorth), has been re-opened. The plaster which obscured the ancient roofs has been removed, and brought to light a specimen of Decorated oak timber. The irregular square parlour-like pews, made of deal, have been swept away; open kneelings of solid oak, with geometrical tracery, being substituted: the pattern of the oak carving and mouldings which were found concealed under the deal, has been adhered to. A new south porch has been added, in keeping with the Decorated character of the church. A new four-light window has been introduced at the west end, filled with stained glass, the work of Mr. A. Gibbs, of London, presented by Mr. Peter Joynson, of Manchester, as a memorial to his parents. It represents "The Four Acts of Mercy." The whole of the church is now filled with painted glass. The south-west window, executed by Messrs. Hardman & Powell, depicts "The Day of Judgment." The north-west represents "The Anointing of the Feet of Christ," "The Woman touching the Hem of His Garment," and "The Appearance of Christ to Mary in the Garden after the Resurrection." The subjects of the remaining ones are, "The Parable of the Talents," "The Good Samaritan," "The Conversation with Mary and Martha, and with the Woman of Samaria, at the Well;" "The Good Shepherd:" the latter is the gift of the cottagers of the parish. There is also one painted by Mr. Evans, representing "The Angel at the Tomb of our Lord" and "The Journey to Emmaus." All these windows, with the exception of the last, were executed by Mr. A. Gibbs. Mr. W. S. Davenport, the patron of the living, has almost rebuilt the chancel, which has a five-light and seven other side windows painted by Mr. Gibbs. The stalls are of oak; the flooring and borders of encaustic tiles. Messrs. F. & H. Francis, of London, were the architects; and Mr. R. Yates was the builder employed.

Jackfield.—The first stone of Jackfield new church has been laid. The written parchment deposited in the stone after "Laus Deo" gives "laus" enough to the rector and churchwardens by recording their names, but no such compliment to either architect or builder.

Newcastle-upon-Tyne.—The foundation stone of a new church and schools for the United Presbyterian congregation, hitherto worshipping in the High Bridge, Newcastle, has been laid. The church will be a plain structure, and will be built on a site situate in Gresham-place, Elison-place. The schools will be underneath the church, below the basement. The architect is Mr. Cairns, of Newcastle; and the works will be carried out under the superintendence of Mr. Hogg, builder.

CONGREGATIONAL CHAPELS.

Colchester.—The foundation-stone of Lion-walk new chapel has been laid. The old octagonal building, having stood nearly a century, has been razed for the site of the present structure, which will be in the Geometric style of English Gothic, of Kentish rag and Caen stone. The dimensions are to be 88 feet long by 53 feet wide, with a tower and spire 125 feet in height. The west end has a centre gable with a four-light window, 26 feet high by 10 feet wide, finished on a moulded stone string course, below which is the principal entrance, opening on to a stone staircase, branching right and left to the galleries. On the north-west angle is a tower and spire 125 feet high, forming an entrance porch to the ground floor, and to the gallery, and a corresponding entrance on the south-west corner. The north and south fronts have five gabled windows, the three centre windows being two-lights, and the ends three-lights, 24 feet high, standing on a moulded string course. The interior is divided into three widths transversely by arched principals of timbers resting on cast-iron columns, which also support the galleries, and five similar arches on each side divide the length into as many bays under the principal purline of the roof. The ceilings will be formed with wrought boarding, the rafters and other timbers being exposed, and stained and varnished. The gallery will extend along the north and south sides, and at the west end over the entrances, where a separate staircase is provided for the school children, in a stone turret, which is made a feature in the west elevation. The pulpit and dais will be at the east end, with the organ gallery behind, in an apse, finished with stone tiers and arch, 40 feet high, moulded. Vestries for the minister and deacons, and a congregational library, are provided at the east end, and a lecture-room, 40 feet by 24 feet, with open roof. The exterior of the buildings will be finished with Kentish rag stone and dressings of Caen stone. The mode of heating will be by warm air, and the lighting with gas star-lights from the arches of the roof, and ornamental brass fittings. The seats will be open benches throughout of pitch pine varnished, moulded on the edges, and finished with carved finials and trefoils. The number of sittings will be about 1,050. The architect is Mr. F. Barnes, of Ipswich, and the contractor Mr. H. B. Smith, of Ipswich, whose estimate for the work of 3,633*l.* was accepted.

Chelmsford.—The Congregational Chapel, New London-road, has been considerably enlarged, and improved in its exterior appearance. The principal enlargement has been effected by carrying out an octagonal back which affords, on the basement, class-rooms adjoining the schools. The ground-floor has additional sittings, which will accommodate about 80 persons; and there is also space for a platform for public meetings, &c., which are sometimes held there. The gallery contains an organ-loft, and sittings for 300 children belonging to the Sunday schools, with the singers' pew in front; the old gallery formerly occupied by the children having been converted into free seats for nearly 150 adults. Two sun-lights are fixed to the ceiling, each containing thirty-five jets, the light being reflected by a cone of enamelled iron. Ventilation is also thus afforded by means of warm and cold air tubes, communicating with the external atmosphere through the roof. A new heating apparatus has been fixed by Messrs. Haden & Son, of Trowbridge. The whole of the works have been carried out by plans supplied by Mr. Bray, architect, Chelmsford, and under his superintendence, at a cost of about 1,400*l.*; the builders, and the several tradesmen of the town, being, we are informed, employed without competition.

Abingdon (*Berks*).—A new Independent Chapel has been opened here. The building was designed by Mr. J. S. Dodd, of Reading, architect. It is in the Italian style, the façade being formed with pilasters supporting a cornice and pediment, and executed in Bath stone. The light is derived principally by means of a large skylight in the ceiling, of ground glass, with coloured borders, the roof being of thick glass; and there are besides windows above the gallery. The front of the gallery is filled with ornamental cast-iron balusters, painted white and relieved with gilt work, backed by marone-coloured cloth. The pillars supporting the galleries are painted Sienna marble, with gilded and white capitals, and the pulpit and balusters of the stairs to it are also white and gold, the pews being the modern low ones, and stained oak colour and varnished, and are estimated to provide sittings for 800 persons. The new edifice is erected in front, and partly on the site, of the old one; the remainder being left and converted into a suite of school-rooms, vestry, &c. Messrs. Winterborne & Rowles, of this town, were the builders.

Farnworth.—A new Congregational Church has been opened in the Albert-road, Farnworth. It originated with the Sunday-school at Dixon-green. The chapel is built of patent brick, with ornamental Yorkshire stone dressings. The style is Grecian. The internal dimensions are 60 feet (exclusive of the organ gallery) by 46 feet. The building will accommodate, with galleries, 800. In the rear of the church there are the minister's vestry, lecture-room, school-room, and various offices. The whole building is heated by hot-water pipes. The estimated cost of the building is 2,500*l.*

STAINED GLASS.

Pinner Parish Church.—A cheap memorial east window has been put up at Pinner, by Messrs. Heaton, Butler, & Bayne. The memorial consists of five principal lights, about 2 feet wide by 12 feet high, with tracery above, — a large window for a parish church of ordinary dimensions. The four Evangelists, with the Saviour (each figure a little above life size), occupy the central portion of the five great lights, having grisaille foliage work above and below them; while another kind of grisaille work fills the tracery of the upper portion of the window. By confining the more expensive work exclusively to the execution of these five figures, this window has been furnished at the small outlay of 70*l.*; while a small window in the same edifice, less than one-third the size, cost more than 200*l.* A correspondent residing in the neighbourhood calls attention to the fact that a large proportion of grisaille in painted windows, while reducing the cost in an extraordinary degree, not only admits more light than a window crowded with richly-coloured subjects, but is more effective, as the one principal line or group of figures is seen, he remarks, to much greater advantage than when several groups are introduced. We can scarcely urge, however, efforts to cheapen stained glass, the excellence of which ought to be the first consideration.

Gloucester Cathedral.—Another painted window is about to be placed in this cathedral, in memorial of Dr. Jenner. The window to be embellished is that at the extremity of the south aisle of the nave, corresponding with the Lucius window. The dean and chapter have contributed 100*l.* towards the window, and the remainder will be raised by subscription. There are now only two windows in the south aisle and west end of the nave which are not painted.

St. Nicholas's, Newcastle.—Two stained-glass windows, the bequest of the late Mr. James Dale, are now complete. Mr. Wailes, of Newcastle, is the artist. The windows are placed in the chancel at the south-east angle, one facing the south and the other the east. The stonework was done by Mr. J. Patterson, of Newcastle. The east window is immediately to the south of the large east window erected last year to the memory of the late Dr. Ions. It consists of five lights or compartments, occupied by a picture of "The Ascension of our Saviour from Mount Olivet." The figure of our Lord occupies the centre light, the adjoining lights on each side being filled by figures of ascending angels in the act of praise and adoration. In the foreground of the mount the eleven Apostles are represented. Each light is surmounted by coloured architectural canopy work; the design in the three centre lights having been carried up into the tracery of the window so as to give an idea of greater space above the ascending figures. In niches of the canopy work angels are represented bearing scrolls. The south window is divided into four compartments; and the design with which it is filled is "Christ blessing Little Children;" being intended as a memorial to the four deceased children of the late Mr. Dale. Under the principal subjects are panels with canopies containing angels bearing scrolls. Above the principal figures are canopies containing angels in niches with harps. The tracery of the window is filled with ornamental foliage surrounding the crest, and monograms of the deceased gentleman.

SCHOOL-BUILDING NEWS.

Wibsey.—The foundation stone of a new school, in connexion with the Independent Chapel at Wibsey, has been laid. The school is intended to be a memorial of the late pastor, the Rev. John Paul. It will be built on ground adjoining the chapel, and from the designs of Mr. M. Brayshaw, architect. It will consist of one large room, 16 yards by nine, having a partition in the middle, so as to form two class-rooms, one for boys, and the other for girls and infants. The style of architecture will be Italian. With the furniture and fittings the outlay will be more than 500*l.* The principal contracts are let to Messrs. J. Roberts & Co., masons, and Mr. C. Wadsworth, joiner.

Stockport.—A new school for infants has been built adjoining the National School. The building is of brick, with stone dressings, and is sur-

mounted by a small balcony. The builders were Messrs. Thackrah & Peirce, of this town; and the architect was Mr. Thomas Allen, surveyor, Shaw Heath.

Sydney.—The foundation-stone of Bicentenary Memorial School-rooms, in connexion with the Congregational Church, Sydney, was laid on the 25th of August.

PROVINCIAL NEWS.

Gloucester.—At a recent meeting of the town council the town clerk read a minute to the effect that at a meeting of the Cattle Market Improvement Committee, on the 20th October, the following tenders were received:—

T. Dunn & Co., Manchester	£6,555	0	0
Randel Stap, London	5,244	0	0
Griffiths & Thomas, Newport	5,155	0	0
Bevan & Son, Bristol	4,999	0	0
Clarke & Williams, Hereford	4,763	17	6
Hardy & Bolt, Newport	4,604	18	8
L. B. Moore, Newport	4,573	0	0
Banson & Murray, Birmingham	4,510	8	1
Shepherd & Meredith, Gloucester	4,386	4	0
O. Estcourt, Gloucester	4,300	0	0
C. Clarke & Son, Wotton, Warwickshire	4,265	14	9
Niblett & King, Gloucester	3,528	0	0
Jones & Son, Gloucester	3,375	0	0

There were also the following separate tenders for iron work:—

J. M. Butt & Co.	£1,315	0	0
Hill & Smith, Brierley Hill	1,216	0	0

The committee resolved that it was desirable that one contractor should undertake the whole of the work, and that the council be recommended to accept Messrs. Jones & Son's tender, it being the lowest. This minute, after some not very seemly discussion, was agreed to.

Clifton.—Messrs. Popes, Bindon, & Clark, architects, of Bristol, have prepared the drawings and specifications for the new Clifton Hotel, and the contracts have been taken, fixing the cost at 20,000*l.* It will stand on a site near the Post-office. The hotel will have a length of 180 feet; and, including the underground offices and attics, it will be six stories high. There will be on the ground-floor a coffee-room, 65 feet long by 30 feet wide, attached to which will be a reading-room, 23 feet square. The dining-room will admeasure 40 feet by 23 feet, and there will also be a ladies' coffee-room, of the same dimensions as the reading-room. On the first-floor will be a drawing-room, measuring 45 feet by 30 feet, and on that and the second-floor will be suites of rooms adapted to the requirements and convenience of families. The hotel will contain sleeping accommodation for about ninety guests, and it will also be provided with a billiard-room, a smoking divan, a Turkish and other baths. The erection of the structure will be carried out with as little delay as possible.

Abergavenny.—The contract for the construction of the new horse, sheep, and cattle markets, known as the Cricket Field, in this town, has been taken by Mr. Moore, of Newport, who has commenced the work. The markets will cover an area of about 4 acres. The plan was prepared by Mr. T. D. Steel, engineer, of Newport. The contract stipulates that the work shall be completed by the 31st of March next.

Salford.—A new wing has been added to the town-hall. The new wing is 204 feet 4 inches in length by 33 feet in width, and comprises two stories. The ground-floor is divided into office-rooms for the town clerk, the inspector of nuisances, and the district surveyor, besides three rooms for the meetings of committees, and one for the hall-keeper. On the second story, one of the principal rooms is appropriated to the Court of Record. The public entrance to the court is at the north end of the building from West Market-street; but there is also an entrance from the corridor, which separates the two wings. The court is approached by a flight of stone stairs. The interior dimensions are 52 feet 8 inches by 28 feet 7 inches. The walls are divided into panels by marginal lines and ornamental corners. In the panel above the judge's seat the royal arms will be placed; and in the corresponding panel on the south wall the arms of the Duchy of Lancaster. Over the central window, on either side of the room, the arms of Lord Sefton, the high steward of the hundred; and those of the borough of Salford will decorate the panels. The other important room in the new wing is the Council Chamber, which has been used for some time, though it has only been decorated of late. The ornamentation of the walls and ceiling is chiefly conventional. The cove of the ceiling is also divided into panels, which are separated on the sides by figures representing the arts and sciences. The new wing is separated from the old one on the east by a corridor, 131 feet long by 12 feet wide, paved with encaustic tiles. The corridor is covered by a glass roof, and there are open iron trellis-work galleries running the whole length of the corridor on each side. The architectural features of the new wing are Roman Doric. Messrs. H. Southern & Son, builders, contracted for the work; and it was executed under the superintendence of Mr. J. Evans, surveyor of the Salford hundred, and from plans furnished by that gentleman.

Newcastle-upon-Tyne.—The Tyne Improvement Commissioners have resolved to proceed immediately to remove the old stone bridge at Newcastle, and to substitute for it a structure less obstructive to the improvement of the river, and more in accordance with the requirements of trade.——The foundation stone of the Volunteer Drill House was laid on the conclusion of the ceremony of the inauguration of the Stephenson Monument. The site of the building is to the east of the Northumberland Cricket Ground, and a short distance from Ellison-place. The architect supplying the plans of the new building is Mr. Thomas Prosser, of this town, and the contractors are Messrs. I. & W. Lowrey and Messrs. Scott & Reid. The building is not merely intended for the use of the various Volunteer corps, but for many public purposes.

Shields.—The new offices of the *North and South Shields Gazette*, situate in King-street and East-street, South Shields, have been opened for business. The new premises extend from King-street to East-street, and occupy an area of 341 superficial yards—the length from back to front being 96 feet. The publishing-offices are in King-street—the front shop being used as such, and also occupied by booksellers, stationers, &c. This part of the building has been fitted up by Mr. John Purvis, joiner and cabinetmaker, South Shields. The rooms above will be let for offices. Adjoining the publishing-office is the office of the Electric Telegraph Company. The new printing-office behind, facing East-street, is built of white and red brick, with stone facings. The proprietors (says the *Gazette*) were anxious, if possible, to make an ornament to the town; and, notwithstanding considerable difficulties, from the situation being in a back street, the architects have managed to make it prominent, chiefly by means of a projecting oriel window, on the angle next the market-place, similar to those still to be found in old cities on the Continent.

Leith.—The corn market and general exchange building is now completed, and will be opened for business purposes on the first Wednesday of November. The frieze panel on the side facing Constitution-street is emblematic of agriculture, and the corn, wine, and wool trade; and has been executed by Mr. Rhind, of Edinburgh, sculptor. The hall is free from pillars or other obstructions, the roof being supported by abutting walls and a combination of iron and wood joisting, decorated. The hall is lighted from the roof by day, and at night by two circular brass gaseliers. The stalls, fifty-two in number, are ranged round the sides, and made to shut in.

Falkirk.—The number of buildings at present in course of erection in this town and neighbourhood (says the *Falkirk Herald*) have made the mason trade so extremely busy that it is almost impossible to procure the services of men to perform small jobs. Mr. Mitchell, inspector, stated, at the commissioners' meeting on Tuesday evening, that none of the masons in town could undertake to build a couple of street gratings, in consequence of the brisk state of trade.

CASES UNDER METROPOLITAN MANAGEMENT ACT.

"THE REGULAR LINE OF BUILDINGS."

At the Clerkenwell Police-court, on Thursday, the 30th ult., *Mr. James Harding*, of Park-place, Kennington-cross, appeared before Mr. D'Eyncourt, at the instance of the vestry of the parish of St. James and St. John, Clerkenwell, "for that you did, in the month of May last, without the sanction, in writing, of the Metropolitan Board of Works, erect a building in Goswell-road beyond the regular line of buildings in the said road or street in which the same building was situate, the distance of such line of buildings from highway not exceeding 30 feet, contrary to the enactment in that behalf of the Metropolis Management Act, 1855, and the other statutes in that bill, of which buildings so erected as aforesaid you were and are the owner."

Mr. Raymond, barrister, appeared on behalf of the vestry; and Mr. Lewis, sen., solicitor, for the defendant.

The matter had been argued on a previous day.

Mr. D'Eyncourt delivered his judgment as follows:—

"In this case it is conceded by both parties, for the purpose of enabling me to arrive at a decision on the meaning of the 75th sec. 25-26 Vic., cap. 102, that the offence complained of is to be taken as completed before the passing of that Act. This being so, the question is whether the remedy given by that section is applicable; and I am of opinion that the section is inapplicable to the present case. It is provided by the 143rd sec. of 18 and 19 Vic., cap. 120 (the Metropolitan Local Management Act), that no building shall be erected beyond the regular line of buildings without the consent of the Board of Works, where the distance of such line exceeds 30 feet from the highway,* and the vestry are empowered to demolish any building erected contrary to the provision. The recent Act repeals that section, and the Board of Works ask the magistrates to make an order under the 75th section for a breach of the 143rd section of the former Act. The 75th section of the new Act is enacted in lieu of the 143rd section of the former Act; but it appears to me, from the very terms of it, that it cannot apply to things already done under the 143rd section. The 75th section contemplates a future and different state of things; viz.,—a building beyond the line of street where the distance does not exceed 50 feet from the highway; the object being, I suppose, to get wider streets than were contemplated under the old Act; and the remedy for any building erected contrary to this Act, without the consent of the board, is to apply to a magistrate for an order directing the demolition of such building. The new remedy is applied to a different state of things; but Mr. Raymond asks me to apply the remedy to a breach of the 143rd section of the old Act. It is clear to me that the consent required under the new Act is a consent to any building being made within certain newly-prescribed limits; and the magistrate's jurisdiction only arises when a building has been erected without such consent. The consent under the former Act was required where the limits prescribed were different, and the building without such consent was an offence provided for in a different way. The summons would, therefore, be dismissed."

After some discussion it was understood that the vestry would apply for a *mandamus* calling on the magistrate to adjudicate.

Looking at the case on its merits, it seems to us that Mr. Harding needed no consent, the addition not being "beyond the regular line of buildings in the street;" although it projects beyond the adjacent houses on one side. The vestry have since determined not to proceed further in the matter.

COUNCIL DESPOTISM.

Sir,—I most fully agree in your remarks on the despotic proceedings at the Royal Architectural Institute. The Engineers' Institution has up to this time been the most despotic of any in this metropolis. The architects may possibly rival us in time. I almost, however, doubt this. The mutterings against the Great George-street doings, if not loud, are earnest and deep. To carve all the loaves and fishes in secret must be pleasant, if outsiders will only look on in admiring silence.

I hope some general and public protest will be made. I enclose my name.

An Engineer.

COMFORT FOR PEDESTRIANS IN WET WEATHER.

IS IT UTOPIAN?

It has been asked, "Why not lay on hot air to warm our dwellings, as well as gas to light them?" On my road to the City this week, I could not but envy the dryness of the pavement in front of the bakers' shops, owing to the heat generated by their ovens. Pondering upon this, the thought struck me, if iron pipes could be laid down beneath the pavement, and supplied with heated air from furnaces erected at convenient distances, what a great comfort it would be during the winter months to pedestrians of all classes to have a dry pavement to walk on: what a saving in the wear and tear of boots, shoes, clothes, &c. How many doctors' bills would be saved, as well as the many valuable lives that are lost solely through disease brought on by damp feet. Last, though perhaps not least in this money-making age, what an enormous increase of custom our tradesmen would derive from the circumstance of the ladies—the "spending power" in the community—being enabled to go out "shopping" every day in the week, instead of, as now, only once or twice a week. Surely, for all the advantages I have pointed out,—comfort, health, and increase of trade,—our householders would not object to being rated to pay the expense incurred. There is nothing impossible in sanitary reform, provided man will but use his inventive faculties properly, and for the benefit of his fellows; and I am in hopes

* This is not our reading of the clause; but it does not seem to us of much consequence in this case.

some of your readers may be able to reduce my "theory" into some practical utility, if you will kindly grant space in your columns for it. Is it Utopian, or have I found the germ of a sanitary truth, requiring only practical heads to bring it out?

EAGLE EYE.

THE PRESERVATION OF STONE.

I TROUBLE you with a few words on the subject of a communication made by me at the late meeting of the British Association, on the subject of artificial stones. In that memoir I said a very few words, which I will take the liberty to quote *verbatim*, on the subject of preservation of stone; and on these words the discussion arose alluded to by Mr. Paul in your Journal of the 25th October.

To his letter I now beg to reply as briefly as possible. My remarks were these:—

"In the application of this subject to the preservation of stone, there seems a probability that some valuable result will follow, from the suggestion of Mr. Ransome to effect the deposit of an insoluble silicate within the pores of an absorbent stone by double decomposition. The objection, strongly felt, that the material thus deposited would probably be in the form of unconnected grains, rather than a cementing film, seems answered by the formation of a stone so solid as the specimens show; and although it is unlikely that any contrivance can render absolutely permanent a stone that has once advanced far in decay, it will be a great step gained if poor and doubtful stones can be rendered almost indestructible before being placed in a building and exposed to danger."*

I am quite at a loss to understand the objection taken by your correspondent to these, or indeed to any other remarks of mine on the subject, on the ground of my having been a member of the committee of last year; unless, indeed, it is to be understood that a public investigation, undertaken, completed, and reported on, is to close the mouths of all engaged in it for ever.

After my paper was read, Mr. Paul opened a discussion on the preservation question. I had not alluded to the subject generally; only connecting it, as I could not help doing, with the account and history of Mr. Ransome's new material. Mr. Paul, in his remarks, asked several questions, most of which are repeated in his letter. To these I replied so far as my experience enabled me; but, as both in the report of the late committee and personally on my own account, it had been expressly stated that the question of success or failure in the preservation of stone in buildings was still regarded as *sub judice*, I did not think it necessary to allude further to the subject. I am still of the same opinion.

Mr. Paul's communication to you evidently assumes that in the paper I read, and in the remarks that followed, I went somewhat out of the way in recommending Mr. Ransome's suggested process for preserving stone. In this he entirely misunderstood me.

I thought and I still think that the principle of obtaining an impermeable and comparatively indestructible stone by depositing within the substance of an absorbent material a hard mineral, indestructible by ordinary atmospheric agency, is the right principle, and will ultimately lead to some good practical result. I also thought and still think, in spite of Mr. Paul, that if Mr. Ransome's new stone is a success, which I agree with him in hoping it will be, there will be some proof that the same method applied to absorbent natural stones may be successful. It will then certainly be of great value if only in rendering poor stones indestructible at a cheap rate.

I cannot yet see the difference between soaking a porous mass of incoherent mineral matter with the silicate of soda, and afterwards dipping it in chloride of calcium, and treating a porous but coherent mineral mass of the same material in the same way.

If the silicate of lime formed is an effectual and permanent cement in one case, why is it not in the other? and if, as Mr. Paul states, silicate of lime is the most liable of all insoluble silicates to alteration and decomposition, under the influence of those agents which determine the decay of stone, how is it that mortars, cements, and concretes have so long held their ground against all comers? how is it that Mr. Ransome's concrete stone has the chance of success which I understand Mr. Paul to admit?

D. T. ANSTED.

* From the *Journal of the Society of Arts*, vol. x. p. 698. Mr. Foster, the secretary of the Mechanical Section, who was in possession of the paper, published it in the Journal without revision by the author.

DOINGS IN MANCHESTER CATHEDRAL.

SIR:—Will you allow me, through the medium of your valuable journal, to call the attention of archæologists to the destructive works now being carried on in Manchester Cathedral; and the so-called restoration. When I visited the cathedral in 1858, the choir floor had several brasses; the choir screen was perfect; and a very fine fifteenth century brass eagle lectern stood in the nave. I went to the cathedral again last month, and found the lectern gone. The verger said it was sold, and is now at Bury. The choir screen, on pretence of its hindering congregational worship, has had its western half and gates taken away; but the planners of this destruction have, in their wisdom, glazed the remaining part of the screen, and hung a tawdry blue curtain in place of the old oak gates; so that for all practical purposes the choir is worse than before. A new pavement has been laid down in the choir; but the brasses are gone (probably sold), and nothing remains to mark where they once lay. I might enumerate other things, but will only mention the noble western tower, which has been half pulled down (I hear without any urgent need for such strong measures), and intended apparently to be so left; as a railing has been placed on it for the safety of visitors. In conclusion, I would ask if there is no one in a city famous for its Fine Art Exhibition, and whose citizens are noted for their patronage and love of art, who will exert himself to save their cathedral from further vandalism; and if possible restore it to its former glories. Knowing how earnestly you have worked for the preservation of our country's antiquities, I hope you will now exert your powerful influence in so good a cause.

H.

Miscellanea.

INSTITUTE OF BRITISH ARCHITECTS.—The first meeting under the "silent system" was held on Monday evening last. The president delivered an address; and a notice of Monsr. Nepven was read. We have received half a dozen letters from Fellows, protesting against the ridiculous resolutions come to by the Council, and commented on in our last; but we do not think it worth while to print them. The writers have the remedy in their own hands. An official report of proceedings has been sent us, but we respectfully decline to insert it.

LEEDS SCHOOL OF ART: PUBLIC SCHOOL PRIZE.—A year ago the committee of this School of Art announced by circular to schoolmasters that funds had been placed at the disposal of the committee for the encouragement of drawing in public or elementary schools. It was resolved by the committee—"That in order to offer an honourable inducement to national and parochial schoolmasters to take an interest in the drawing-classes of their schools, a prize be established, to be called 'The Public School Prize,' to consist of 5*l*. 5*l*., to be awarded annually, after each examination of the School of Art, to the school having the largest number of pupils who pass examination before the inspector for art." The prize has been won this year by Mr. Tinker, head-master of Messrs. Marshall's school, Holbeck; thirty-two of whose pupils passed a successful examination.

THE LIVERPOOL FREE PUBLIC LIBRARY.—The annual report, which has just been printed, states that, during the past year, 456,372 volumes have been issued at the Reference Library and returned; being an increase of 59,816 compared with the previous twelve months. The reading-room still continues to be crowded, particularly in the evening, when from 400 to 500 readers are frequently present at one time. During the year, 1,541 volumes have been added to the library; viz., 1,282 by purchase; 84 by donation; 38 Parliamentary Papers; and 137 from the Commissioners of Patents; making the present contents of the library 36,522 volumes. The attendance of visitors at the Museum has been very large. The total number from the 18th of October to the 1st of September (a period of forty-five weeks) amounts to 321,714; giving a daily average of 1,739.

PRESERVATIVE ACTION OF SULPHATE OF COPPER ON WOOD.—The experiments of Mr. Kœnig are said, by the *Repertoire de Chimie*, to have demonstrated that sulphate of copper deprives wood of the nitrogenous matter which acts as a ferment, this matter being found in the solution of copper. At the same time a combination of resin and copper is formed, which closes up the pores of the wood and preserves it from the action of the air. The wood, however, is still susceptible of decomposition, in consequence of the variations of temperature and humidity. Mr. Weltz, while occupied with the solution of the last questions, has arrived at the following conclusions:—He has remarked that the wood gradually blackens as the layers of metallic copper are produced on it. The sulphate of copper is fixed in the wood: this salt decomposes itself into metallic copper and sulphuric acid. The latter chars the wood; and it is through this layer of charcoal, the preserving agency of which has been so often remarked, that the wood is enabled to resist the action of humidity.

POMPEII.—In one of the structures recently discovered, the bedrooms for the men, instead of receiving light from the door as customary, have long windows, in one of which pieces of glass have been found, which evidently served to close the window space. The wall is lined with lead, to prevent dampness: over this the stucco had been laid on; and on this the frescoes were painted.

SANITARY INFLUENCE OF DRAINAGE.—An instance of the influence of town drainage on the public health is shown in a report which has just been issued by the sanitary committee of the Halifax corporation. Great sewerage works have been constructed since 1851; and between that period and the present the death-rate has decreased from 25·39 per 1,000 to 21·48 per 1,000. This is in the town of Halifax itself: in the union the mortality has only decreased 1¼ per cent.

SANITARY CONDITION OF LEAMINGTON.—The drainage question is at present exciting much interest in Lymington, and ere long, if steps be not taken to mend matters, the want of proper drainage will lead to serious consequences. The river bed at the quay is saturated with the vilest filth from the town drains; and when the tide is low the effluvium arising from the deposit is most sickening and overpowering. Cases of fever in the neighbourhood are becoming frequent; and should the winter be of a mild and humid character, the state of the drains, &c., will produce the most serious results.

THE FEN DISTRICT.—In connection with the recent disaster at the Marshland Smeeth and Fen drain, it may be stated that the commissioners have agreed to have a dam made across the breach, and a new sluice built. Mr. Page, C.E., who was consulted by the commissioners, promised that the dam should be completed in a fortnight, and the new sluice finished in ten weeks; and if these predictions are realized, the Smeeth and Fen will be restored to its former position. As regards the Middle-Level drainage, the nine syphons erected are said to have worked satisfactorily. When they were put in operation the water was reduced in two days, at March Bridge, a distance of 16 miles from the dam, from 7 feet 9 inches to 4 feet 7 inches. When the other seven syphons proposed to be erected are completed, of course the discharging power organized will be increased. A new board of commissioners is formed to secure the drainage of the Middle Level, and the new board will borrow on mortgage 32,000*l*. This amount represents the injury so far sustained by the commission from the disasters against which it has had to struggle.

NATURE'S VENTILATION.—Upon the proper adjustments of the dynamical forces which keep up the ceaseless movements of the atmosphere, the life of organic nature depends. If the air that is breathed were not taken away and renewed, warm-blooded life would cease: if carbon and oxygen, and hydrogen, and water, were not in due quantities dispensed by the restless air to the flora of the earth, all vegetation would perish for lack of food. That our planet may be liable to no such calamity, power has been given to the wayward wind, as it "bloweth where it listeth," to bring down from the pure blue sky fresh supplies of life-giving air wherever it is wanted; and to catch up from the earth, wherever it may be found, that which has become stale; to force it up, there to be deflagrated among the clouds, purified and renovated by processes known only to Him whose ministers they are. The slightest change in the purity of the atmosphere, though it may be too slight for recognition by chemical analysis in the laboratory, is sure to be detected by its effects upon the nicer chemistry of the human system; for it is known to be productive of disease and death. No chemical tests are sensitive enough to tell us what those changes are; but experience has taught us the necessity of ventilation in our buildings, of circulation through our groves. The cry, in cities, for fresh air from the mountains or the sea, reminds us continually of the life-giving virtues of circulation. Experience teaches that all air, when pent up and deprived of circulation, becomes impure and poisonous. In referring to ventilation, we are never to forget that, in order to secure nature's pure air, it is essential to guard against the many sources of its pollution. The air which descends to us is pure; but it is left to man to maintain it so; hence we have to drain our marshes, empty foul ditches, remove cesspools, and see that our streets are sewered and paved. The Deity has given laws for the moral government of society; but He leaves to man, on whom He has bestowed intelligence, the discovery and the application of those scientific means which are necessary to health and physical happiness.—*Captain Maury.*

ACCIDENT AT WHITEHAVEN.—The wall of the North Harbour at Whitehaven has given way, and sunk 3 or 4 feet. To repair the damage, it seems, will cost some thousands of pounds.

THE WOLVERHAMPTON SCHOOL OF ART.—A member of the committee of the School of Art in Wolverhampton, which had been lately given up, informs us, we are glad to say, that, through the exertions of Dr. Wollaston and two or three others, the school has been started afresh, with a new committee, and under the tuition of Mr. Sturtevant, of Dudley; and that there is every prospect of success.

EDINBURGH ARCHITECTURAL ASSOCIATION.—The second meeting of the session was held on Wednesday night, the 29th ult. Mr. R. T. Shiells, president, in the chair. After some preliminary business, Mr. Alexander Ballantine read a paper "On stained glass." After remarks from most of the members present, it was intimated that at the next meeting, on November 26th, a paper will be read on "Church Decoration," with particular reference to local churches.

THE BRISTOL HARBOUR - IMPROVEMENT SCHEME.—The Bristol town council have decided, by a majority of thirty-seven over fifteen, to effect various improvements in the Avon, with the view of facilitating the navigation of the river. These improvements are of a heavy and costly character, and will involve the imposition of 14,000*l.* annually, in the shape of dues, on the shipping and commerce of the port. It is stated that the amount required for executing the work will be 550,000*l.*, which it is proposed to raise on the guarantee of city property, as well as on the rates and dues levied on the shipping.

UTILIZATION OF WASTE HEAT.—An invention has recently been patented by Mr. J. S. Joseph, of Rhostyllan, North Wales. It consists in constructing a large retort built up of fire-brick or other suitable material, and surrounded by an outer shell of the same, so that a space may be left all round the retorts, the ends of the latter passing through the ends of the enclosing structure, and being provided with suitable doors. In order to support the retort, he forms piers of fire-brick or other suitable material underneath the same. This retort oven he employs either for making coke, charcoal, or for any other similar processes. At or near the top of the retort he forms suitable openings, through which the combustible gases formed inside the same by any of the above-mentioned processes pass into the surrounding space. He introduces small jets of atmospheric air, and thus causes the complete combustion of the combustible gases, thereby creating an intense heat. The hot products of this combustion by preference he employs for generating steam, making illuminating gas, firing pottery, heating drying-stoves for general purposes, for calcining ores, for burning bricks, or for burning lime in kilns.

MARSEILLES.—Great alterations have been made in Marseilles. It is new Paris in miniature. *Galignani's* correspondent says:—Demolitions here and magnificent buildings there—new streets—new palaces—new everything, exactly as in Paris itself, and in the same style of magnificence. The *cafés* are as luxuriantly decorated. The broad thoroughfares are as animated. There is nothing, in fact, to remind one that this is a provincial town. The Bourse is new and handsome: there is a new palace for their Majesties facing the sea: a cathedral is rising which promises to be magnificent. Even the little, plain old church of Notre Dame de la Garde, which, on the hill overlooking the Mediterranean, receives the votive offerings of sailors who have been preserved from shipwreck—even this simple structure is too simple and too modest for the taste of the day. A little while hence and the poor mariner who ascends with his votive offering, a picture of the Virgin smiling compassionately upon his ship in distress, will find himself dazzled and perplexed by the showy marble with which the new church will be encrusted. But let us come to the docks. The word is an importation; but the idea conveyed is not exactly the same as that attached to the English expression, for it is confined to the bonded warehouses. The new docks, opened yesterday for the first time, compose, in fact, a line of warehouses resembling in size and appearance the mighty private structures to be seen at Liverpool. They do not border the basin like the buildings in the London Docks, but stand away on the quay, leaving the port free and unencumbered. When we English say "docks," we mean the whole together, basin and warehouses; but the French mean the warehouses taken separately. France is really beginning a new career of commercial life, and is borrowing from England both plan and system.

THE WINTER EXHIBITION.—The annual Winter Exhibition of Cabinet Pictures by Living British Artists (the tenth) is now open, at the French Gallery, Pall-mall. It includes a number of interesting works.

THE ARRANGEMENTS OF MODEL LODGING-HOUSES.—A Leeds correspondent, under the signature of "Observer," points attention to various defects in the management and arrangements of model lodging-houses, particularly that at Leeds, where the treatment of lodgers, he says, is such occasionally, that no one with self-respect would continue to reside where such management is allowed. The closeness of the bed-closets, too, he states, is such that their doors have to be kept open by day; to the loss, at times, of those renting them, from petty thefts by the less reputable and more itinerant of the lodgers. The comfort and health of the residents in such dwellings ought to be well studied; and at Leeds some such arrangement as a visiting committee appears to be requisite.

THE LIABILITY OF CHURCHWARDENS TO REPAIR A CHURCH.—At the Norwich Police-court a case has been tried, in which the Local Board of Health were the plaintiffs, and the churchwardens of the parish of St. John, Maddermarket, were the defendants; who were called upon to answer to an information laid by the city surveyor, Mr. T. D. Barry, as to neglect of notice that the church was ruinous and dangerous and must be repaired. The wardens had urged that the building was as sound as it had been for forty years. In court, however, they merely pleaded that they were not liable, the rector being responsible. After evidence *pro* and *con* was led, the magistrate ordered the wall to be pulled down; and it appeared to be understood that the wardens would be called on to pay the expense.

A NEW CROSS-CUT SAW.—A machine for cross-cutting large logs of timber, made by Messrs. Worssam & Co., of Chelsea, is described, with an engraving, in the *Mechanics' Magazine* of 24th ult. This particular one was ordered by Captain Schwartz, Russian Imperial Minister in England, for the Government dockyards at Cronstadt. The saws are 42 inches in diameter, having a traverse of 4 feet 6 inches, the counter-shaft making 100 revolutions per minute. The whole machine weighs about three tons, and requires an average of 6-horse power to drive it. It is intended to cut round or square timber up to 30 inches in diameter. The cut is made by two circular saws working in the same plane one above another; the lower half of the log being cut by the bottom saw, and the other half by the top one. The principal and most important novelty about this woodcutting tool consists in the use of two smaller saws instead of one large one. To do the work of these 42-inch saws a 7-feet diameter saw would be required, costing 123*l.*, wholesale price; measuring in thickness No. 10 wire gauge (about $\frac{1}{4}$ inch); being difficult to get sound, and also liable to wobble while doing its work. One 42-inch diameter saw costs 9*l.*; measures one-half of the thickness of a 7-feet one; and takes, therefore, so much the less power to drive it; there being, at the same time, much less risk in its use and its manufacture; while the fact of less power being required, enable a slighter and therefore cheaper frame to be used.

THE MINERAL OIL OF CANADA.—A special commissioner sent from London by a company recently established here, to inquire into this subject, states that he has seen unmistakable evidences of the existence of oil over a tract of country twenty miles square round the present Oil Springs. In Canada West, he says, the Canadian native oil is an article of common use in railway carriages, hotels, and private houses. It is mixed with common oil to modify the light, as its own illuminating power is of extreme brilliancy (a quality it possesses in a degree far beyond most of the Pennsylvanian oil). Moreover, large establishments at Niagara, Toronto, St. Catharine's, and elsewhere, are lighted up with gas produced from it (6,000 feet from a barrel of crude native oil), far surpassing coal gas, and at less than half its price. The gas is made in an apparatus that will go in about the size of a pig-stye in a backyard, and such as any household servant, or even ignorant labourer, could manage safely. There is no more art in making this gas, says the *Montreal Gazette*, than there is in putting a shovel of coals on a fire, or a log of wood into a stove; and the combustion that makes the oil into gas is kept up by the refuse product of distillation. This quality of producing fine gas will create a large demand for Canadian petroleum in Russia, Germany, Italy, and France, where fuel is scarce and light a high-priced commodity. Experiments for saponifying the oil have been successfully carried out.

LIVERPOOL ARCHITECTURAL SOCIETY.—The last meeting was presided over by Mr. W. H. Weightman. Several donations of books were announced. A new method of laying down flooring, the invention of Mr. Bellis, of Chester, was explained; as was also a model of a wrought-iron girder supplied with tubes containing water, which might be applied in case of fire. A report from Messrs. Hay, Weightman, & Stubbs, delegates to the London Architectural Alliance, was read and approved. Some routine business was then disposed of, and the meeting adjourned.

JARROW.—A large public building and institute, for the use of the working men of Jarrow, is about to be erected upon a piece of ground near the railway-station, liberally presented by Sir Walter James, Bart. The designs have been prepared by Mr. Archibald Dunn, of Newcastle, architect; and, in addition to a large room, to contain 800 persons, there is a library, refreshment-rooms, smoking-rooms, and club-rooms, for the use of the working men. There are also washing-rooms and baths attached to the building. The establishment of such an institution, it is confidently expected, will be of the greatest benefit to the working classes, who have themselves liberally contributed towards the funds necessary for the erection of it.

A-N ICE ARCHITECT.—Mr. Hassel, an architect who has been engaged in similar undertakings in Russia, has issued proposals for the construction, by means of subscriptions of shareholders, of an ice palace in the St. Lawrence, opposite Montreal, in the approaching winter. The building is to be 40 feet high, 144 feet long, and 56 feet deep, surrounded by a colonnade and topped with a dome; all, except the windows and doors, to be built of ice. A large skating ring is proposed to be annexed to the building. The rooms, which will include a large ball-room, ladies' and gentlemen's rooms, and halls, are to be "all heated by stoves, and warranted not to melt!" It is stated that the palace could be built in three or four weeks, and at a cost of about 3,500 dollars. The architect is understood to be a very cool hand.

THE MANCHESTER ASSIZE COURTS.—Considerable progress has been made with the New Assize Courts, Strangeways. With the exception of those of the great hall and front entrance, the roofs are now covered in; and, in a short time, the whole of the roofing will be complete. By Christmas, it is hoped every part of the structure will be under cover. But for a delay of three weeks, in consequence of a stonemasons' strike, this desirable object would have been already attained. The judges' lodgings are now near completion; and some of the stained-glass windows in the upper rooms have recently been put in. Strenuous endeavours are being made to get the building ready for occupation by August, 1863. The works in the interior are being entered into with energy. The ceiling of the Civil Court is finished, and its moulded timber beams are fixed. Preparations are also being made to fix the ceiling in the Criminal Court. The upper part of the main entrance has been raised, and the windows of the Grand Jury Room have been erected. The front is now ready to receive the chief gable, and its erection will be proceeded with at once.

ABERDEEN: THE NEW PUBLIC BUILDINGS.—At a meeting of the general local committee on the new public offices for the county and city, the question as to providing a county hall, or whether accommodation could be made adequately for county meetings without it, having been raised; it was resolved that, in any plan of the new buildings, a hall should be included. A good deal of the property on the site belongs to the town; and it is estimated that the property that would require to be bought from others would amount to between 4,000*l.* and 5,000*l.* The plan contemplates widening Broad-street at the bottom about 10 feet. The buildings appear to be composed of a centre with two wings; the main entrance having a large corridor and staircase intended for the use of both wings. The county offices occupy the east wing. The arrangements for the court-house generally, we understand, are taken from the plan of Messrs. Peddie & Kinnear, adopted by the county committee. The west wing is devoted to the accommodation of the public business of the town. The town-hall on the west of the main entrance corresponds in position with the county hall on the east; there being five large offices on the ground-floor to Union-street. The town-hall is 66 feet by 40,—a good deal larger than the present hall; and the accommodation for the town clerk, &c., adjoins it. Toward Broad-street the building would be of three stories, with two large shops on the ground-floor: the wings to Union-street and Castle-street are of two stories.

HARTLEPOOL.—The Hartlepool Harbour Commissioners have taken up the question of having a harbour of refuge at that port, and have appointed a committee to consider and report on the various plans that have been proposed for the attainment of the object in view.

PHOTOGRAPHIC PROGRESS IN AMERICA.—A New York photographer is making a good deal of money by exhibiting photographs of the slain as they lie on the battle-field of Antietam. These pictures are said to have a terrible distinctness. By the aid of the magnifying-glass the features of the slain can be distinguished.

THE LATE ACCIDENT IN TOOLEY-STREET.—At the inquest a great number of witnesses were examined, who ascribed the accident to the fact that the mortar had not set sufficiently when the centres were struck. The mortar, it also appeared, had been kept from drying by the recent rains and the water of the Thames, which, during the flood, had percolated through the wall. The jury, having consulted, returned a verdict of "Accidental Death" in each case. They at the same time recommended that greater care should be used by skilled workmen in future in striking the centres of similar buildings, and not until it was known that the mortar used was fully set. The foreman said the jury had made this remark owing to the great number of similar warehouses and wharfs that were being erected in the immediate neighbourhood at the present time. The district surveyor, Mr. Hesketh, wishes us to state that he did not assign the fall of the arches to the pile-driving going on; but to the premature removal of the centres.

THE SANITARY CONDITION OF COCKERMOUTH. The Guardians of Cockermouth have appointed a committee to be the local authority to carry out the provisions of the Nuisances Removal Act, 1855, the Diseases Prevention Act, 1855, and the 23 and 24 Vict., cap. 27, amending them. Mr. Wyndham, the mover of the resolution, spoke of Cockermouth as the most unhealthy town in the kingdom; and said he had been at some trouble in obtaining statistics of deaths from the registrars and elsewhere. From these it appeared that the average death-rate, for ten years, in 1,000, was as follows:—Keswick, 19; Cockermouth, 25; Workington, 23; Maryport, 21. From this it would be seen that the death-rate in Cockermouth was greater than in any other district in the union. It was proved then that the neighbourhood was healthy; and to what must they ascribe the enormous per centage of death in the town? Clearly to the nuisances which existed in it; and foremost amongst them he placed midden-steads, which were allowed to stand uncleansed for as long as eight months. It was said that if they were not allowed to remain the interests of the farmer would be interfered with. Now, they might see that thirty-five dead bodies were annually conveyed to the cemetery more than need be; and he argued that the farmer might as well claim these bodies as that the midden-steads should be retained. The Cockermouth people had refused to govern themselves in this matter; and he therefore hoped the board would not refuse him this committee; which, as we have said, has therefore been appointed.

IMPROVEMENTS AT OXFORD DURING THE LONG VACATION.—As has been the custom for many years, advantage has been taken of the Long Vacation to carry out various improvements both in the University and the city. Most of the colleges, halls, and churches, according to reports in the local papers, have undergone more or less renovation and alteration; but in many instances the work of restoration has assumed a more important shape. The chief work during the past three months has been the continuance of the extensive restoration of St. Mary's Church, by Mr. Gardiner, builder, under the architectural superintendence of Mr. Buckeridge. The work is now in a very advanced state. At Christ's Church, the extensive alteration by the pulling down of Fell's-buildings has been in active progress. The architect of the new building is Mr. Deane, and the builder, Mr. Symm. A new window is being fitted into the western end of All Souls' Chapel. A very extensive restoration and enlargement is being carried out at St. Aldate's Church, by Mr. Curtis. The Corn Exchange is rapidly progressing. The woodwork of the roof has been finished, and the workmen are now engaged in putting in the glass, which is of immense thickness. The town council have determined to construct brick arches or cellars under the whole extent of the building, at an estimated cost of 500*l*. On the outskirts of the city considerable progress is being made in the building of private residences.

BARON ROTHSCHILD'S HOUSE.—With reference to the notice in our last number, we have to mention that the girders are of *wrought* iron, not cast.

INSTITUTION OF CIVIL ENGINEERS.—The weekly meeting of the Institution of Civil Engineers will be resumed on Tuesday next, the 11th instant, when a paper on "The Railway System of Germany," by Mr. Robert Crawford, of Homburg, will be read.

APPLICATION OF HYDRAULIC POWER TO THE LIVERPOOL DOCK GATES.—On the recommendation of the Docks and Quays Committee, it has been agreed to apply hydraulic power to the gates at the Wellington Half-tide Dock, the Huskisson Locks, the Sandon Dock Entrance, and the outer storm gates at the two last-named docks; and to provide two hydraulic capstans on the pier heads of Sandon Basin, at an estimated cost of 9,205*l*. The building for the weights of the engine will adjoin the present engine, and form part and parcel of it on the east side of the Huskisson Lock. It will open four pairs of gates. Three minutes will be required to open the first four pairs; then there will be an interval of five minutes to elevate again, and then four more pairs can be opened.

WATERPROOF GLASS ROOFS.—A patent has been taken out by Messrs. Showell, of Manchester, for waterproof glass roofs, recommended as especially applicable to railway stations and horticultural buildings. The invention consists of plates of glass, with the edges only turned up; and, where they meet one another, protected by a metal cover. The top edge of the glass rests upon a horizontal flange L iron purlin, and the bottom edge on the edge of the vertical flange; so that the top edge of the glass is overlapped by the bottom edge of the plate above. A screw bolt passes through the bottom end of one cover between the two adjacent plates of glass under this cover, through the top of the cover immediately under it, and between the edges of the two adjacent plates of glass under this cover, and is then secured through the horizontal flange of the L iron purlin. A pin passes through the sides of the bottom end of the covers, and prevents the glass plates from slipping down, by catching their turned-up edges. There is a further improvement, in which the top and bottom edges of the plates of glass are turned the one up and the other down. In this form a more secure joint, it is said, is effected at the top and bottom edges of the glass, and with a less lap. The top end of each cover prevents the glass plate next above it from slipping down by catching its turned down edge, and no pin is required. By this new form of construction no putty is needed in the joints; and expansion and contraction, or any other slight movement, can go on without impairing the waterproof construction.

TENDERS.

For a house and warehouse, No. 55, Bishopsgate-street Without. Mr. Edmeston, sen., architect:—

Piper & Wheeler	£930	0	0
Goslin	910	0	0
Woodward	890	0	0
Scrivener & White	859	0	0

For subway at St. Saviour's Workhouse. Messrs. Roper & Jarvis, architects:—

Dover	£467	10	0
Downs	248	0	0
Rudkin	235	0	0
Kent	225	0	0
Baguley (accepted)	215	0	0
Deards	213	0	0

For six cottages at Ash, Surrey, for Messrs. Crooke. Mr. Henry Peake, architect, Guildford:—

Stevens	£952	0	0
Goddard	909	0	0
Duke	887	0	0
Garnett	878	0	0
Wadey	875	15	6
Beagley	866	0	0
Strudwick	837	10	0
Pollard	816	0	0
T. & J. Loe	810	0	0
West	805	0	0
Mason	802	0	0
Smith	786	10	6
Cooke (accepted)	730	19	0
Foster (made an error in estimate of 125*l*.)	626	0	0

For alterations and new story to house, Pembridge Villas, Bayswater. Mr. H. H. Collins, architect:—

Goodwin	£770	0	0
Ring	728	0	0
Newman & Mann	694	0	0
Rolfe	635	0	0

For various works, alterations, &c., to house and premises, George-street, Hanover-square. Mr. H. H. Collins, architect:—

Elmes	£261	0	0
Drew	238	0	0
Ring	196	0	0

For coach-house and stables, Woodville-street, Woolwich, for Mr. Francis Sales. Messrs. W. Gosling & Son, architects:—

Smith	£350	0	0
Warner	317	13	0
Mills	312	10	6
Sonnex	310	0	0
Ledbetter	280	0	0
Thompson	275	0	0
Griffiths	273	0	0

For additions to dwelling-house, situate at Bowater-crescent, Woolwich, for Mr. Richard Ruegg:—

Smith	£195	0	0
Sonnex	189	0	0
Mills	170	0	0
Lonergan	158	0	0
Thompson	149	0	0
Ledbetter	145	0	0

For building model lodging-houses, Commercial-street, Whitechapel, for the directors of the Jewish and East London Model Lodging-house Association. Mr. H. H. Collins, architect. Quantities supplied:—

Patman & Fotheringham	£6,594	0	0
Brown & Robinson	6,441	0	0
Brass	6,437	0	0
Fish	6,327	0	0
Longmire & Burge	6,279	0	0
Myers	6,193	0	0
Ashby & Sons	6,024	0	0
Wills	5,931	0	0
Newman & Mann	5,916	0	0
Ring	5,885	0	0
Coleman	5,880	0	0
Perry & Judson	5,804	0	0
Stapp	5,338	0	0

(These estimates are without fire-proof flooring, which will be additional.)

For building a new warehouse for Messrs. Corney, Little Britain. Mr. Trehearne, architect. Quantities supplied:—

Mansfield	£1,300	0	0
Thompson	1,271	0	0
Howard	1,137	0	0
Palmer & Sons	987	0	0

For erecting a house in Walworth-road, for Messrs. Brown & Son. Mr. Henry Jarvis, architect. Quantities not supplied:—

Rudkin	£1,589	4	5
Maeers	1,497	0	0
Warne	1,472	0	0
Chessum	1,418	0	0
Ward	1,398	0	0
James & Ashton	1,373	0	0
Furnivall	1,291	0	0
Kent	1,285	0	0
Sharpington & Cole	1,255	0	0
Thompson	1,212	0	0
Tarrant	1,192	0	0
Sawyer	976	0	0

TO CORRESPONDENTS.

Proposed Examinations (the half-dozen correspondents who ask for information as to the examinations, should apply to the secretaries, in Conduit-street).—E. L. T.—Tyro.—H. A. B.—F. I. B. A.—Old Member.—One ashamed of the Council.—A. G. C.—J. P. S. & C. F. H.—C. I.—R. H.—Architect, Dublin (write to the Institution, Great George-street, Westminster).—J. S. (declined).—M. B., Langport (ventilation is wanted).—O. J.—L. S.—F. E. S. (will find report has been corrected).—F. E.—H. A. D.—Rev. C. D.—A.—M. A.—A. W. (award might be set aside if dishonesty could be proved. Better leave it alone).—C. H. F.—A Clerk.—An Aspirant.—E. B. K. (ought to have been correct in his statement).—E. C.—F. T. D.—R. M. P.—H. A. C. (the parties in London have nothing to do with the construction of the building).—E. F. L.—C. H.—F. R. (we are forced to decline "circular" articles).—Mr. V.—Pro Patria.—R. H.—A. S.—R. B. P. (too late.)—P. P. (in type) T. M. R. (ditto).

We are compelled to decline pointing out books, and giving addresses.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender; not necessarily for publication.

NOTE.—*The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.*

Advertisements cannot be received for the current week's issue later than **FIVE o'clock, p.m.,** *on Thursday.*

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